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Rules of Governmental Agencies

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March 27, 1998 Volume 22, Issue 13

PROPOSED RULES

ADOPTED RULES

REGISTER PUBLICATION SCHEDULE 1998

Material Rec'd before Noon on:	Will be in Issue #:	Published on:	Material Rec'd before Noon on:	Will be in Issue #:	Published on:
Dec. 23, 1997	1	Jan. 2, 1998	June 30, 1998	28	July 10, 1998
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June 23, 1998	27	July 6, 1998*	Dec. 29, 1998	2	Jan. 8, 1999

Please note: When the Register deadline falls on a State holiday, the deadline becomes 4:30 p.m. on Monday *(the day before)*.

*** Monday**

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March 1998 – 730 – GA-868

DEPARTMENT OF INSURANCE

NOTICE OF PROPOSED AMENDMENTS

1) Heading of the Part: Definition of Salary

2) Code Citation: 50 Ill. Adm. Code 4402

3) Section Numbers: Proposed Action
4402.10 Amendment
4402.20 Amendment

4) Statutory Authority: Implementing and authorized by Section 1A-103 of the Illinois Pension Code [40 ILCS 5/1A-103] (see P.A. 90-507, effective August 22, 1997).

5) A Complete Description of the Subjects and Issues Involved: These amendments will revise the main authority note and other corresponding citations pursuant to P.A. 90-507, effective August 22, 1997, which repealed the majority of Division 5 of the Illinois Pension Code and replaced it with Article 1A.

6) Will this proposed amendment replace an emergency rule currently in effect? No

7) Does this amendment contain an automatic repeal date? No

8) Does this proposed amendment contain incorporations by reference? No

9) Are there any other proposed amendments pending on this Part? No

10) Statement of Statewide Policy Objectives: These amendments will not require a local government to establish, expand or modify its activities in such a way as to necessitate additional expenditures from local revenues.

11) Time, Place, and Manner in which interested persons may comment on this proposed rulemaking: Persons who wish to comment on this proposed rulemaking may submit written comments no later than 45 days after the publication of this Notice to:

Chuck Feinen
Staff Attorney
Department of Insurance
320 West Washington
Springfield, IL 62767
217-782-2867

(or)

Mary Meyer
Paralegal
Department of Insurance
320 West Washington
Springfield, IL 62767
217-785-8220

12) Initial Regulatory Flexibility Analysis:

A) Types of small businesses, small municipalities and not for profit corporations affected: None

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NOTICE OF PROPOSED AMENDMENTS

B) Reporting, bookkeeping or other procedures required for compliance: None

C) Types of professional skills necessary for compliance: None

13) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the two most recent agendas because the Department did not anticipate the repeal of Division 5 of the Illinois Pension Code.

The full text of the Proposed Amendments begins on the next page:

DEPARTMENT OF INSURANCE

NOTICE OF PROPOSED AMENDMENTS

TITLE 50: INSURANCE
CHAPTER I: DEPARTMENT OF INSURANCE
SUBCHAPTER aaa: PENSIONS

PART 4402
DEFINITION OF SALARY

AUTHORITY: Implementing and authorized by Section 1A-103 of the Illinois Pension Code [40 ILCS 5/1A-103] (see P.A. 90-507, effective August 22, 1997).

SOURCE: Adopted at 3 Ill. Reg. 15, p. 104, effective April 9, 1979; codified at 6 Ill. Reg. 14844; amended at 13 Ill. Reg. 3801, effective March 15, 1989; amended at 20 Ill. Reg. 5838, effective April 9, 1996; Part 6302 recodified to Part 4402 at 21 Ill. Reg. 1727; amended at 22 Ill. Reg. _____, effective _____.

Section 4402.10 Authority

This Part ~~Rule~~ is promulgated by the Director of Insurance of the State of Illinois pursuant to Section 1A-103 ~~22-501.1~~ of the Illinois Pension Code [40 ILCS 5/1A-103~~22-501.1~~] ~~which empowers the Director "...to make reasonable rules and regulations...as may be necessary for making effective and implementing the provisions of the Pension Code..." [40 ILCS 5/1-101 et seq.]~~.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 4402.20 Purpose and Scope

The purpose of this Part is to define the word "salary" as used in Section 3-125 and 4-124 of the Illinois Pension Code [40 ILCS 5/3-125 and 4-124] as it applies to pension funds formed pursuant to Articles 3 and 4 of the Illinois Pension Code. ~~This Part shall apply to all pension, annuity or retirement funds or systems under the authority of Articles 3 and 4 of the Illinois Pension Code [40 ILCS 5/3-101 and 4-101] which are not financed in whole or in part by the State of Illinois.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

DEPARTMENT OF INSURANCE

NOTICE OF PROPOSED AMENDMENTS

1) Heading of the Part: Electronic Filing

2) Code Citation: 50 Ill. Adm. Code 4405

3)

Section Numbers:	Proposed Action:
4405.10	Amendment
4405.20	Amendment

4) Statutory Authority: Implementing Section 1A-109 and authorized by Section 1A-103 of the Illinois Pension Code [40 ILCS 5/1A-109 and 1A-103] (see P.A. 90-507, effective August 22, 1997).

5) A Complete Description of the Subjects and Issues Involved: These amendments will revise the main authority note and other corresponding citations pursuant to P.A. 90-507, effective August 22, 1997, which repealed the majority of Division 5 of the Illinois Pension Code and replaced it with Article 1A. Section 1A-109 of the Illinois Pension Code [40 ILCS 5/1A-109] now requires all pension funds to file an annual statement with the Department. These amendments will reflect that change.

6) Will this proposed Amendment replace an emergency rule currently in effect? No

7) Does this amendment contain an automatic repeal date? No

8) Does this proposed amendment contain incorporations by reference? No

9) Are there any other proposed amendments pending on this Part? No

10) Statement of Statewide Policy Objectives: These amendments will not require a local government to establish, expand or modify its activities in such a way as to necessitate additional expenditures from local revenues.

11) Time, Place, and Manner in which interested persons may comment on this proposed rulemaking: Persons who wish to comment on this proposed rulemaking may submit written comments no later than 45 days after the publication of this Notice to:

Chuck Feinen		Mary Meyer
Staff Attorney		Paralegal
Department of Insurance		Department of Insurance
320 West Washington	(or)	320 West Washington
Springfield, IL 62767		Springfield, IL 62767
217-782-2867		217-785-8220

12) Initial Regulatory Flexibility Analysis:

DEPARTMENT OF INSURANCE

NOTICE OF PROPOSED AMENDMENTS

A) Types of small businesses, small municipalities and not for profit corporations affected: None

B) Reporting, bookkeeping or other procedures required for compliance: None

C) Types of professional skills necessary for compliance: None

13) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the two most recent agendas because the Department did not anticipate the repeal of Division 5 of the Illinois Pension Code.

The full text of the Proposed Amendments begins on the next page:

DEPARTMENT OF INSURANCE

NOTICE OF PROPOSED AMENDMENTS

TITLE 50: INSURANCE
CHAPTER I: DEPARTMENT OF INSURANCE
SUBCHAPTER aaa: PENSIONS

PART 4405
ELECTRONIC FILING

Section
4405.10 Authority
4405.20 Purpose and Scope
4405.30 Electronic Filing
4405.40 Procedure

AUTHORITY: Implementing Section 1A-109 and authorized by Section 1A-103 of the Illinois Pension Code [40 ILCS 5/1A-109 and 1A-103] (see P.A. 90-507, effective August 22, 1997).

SOURCE: Adopted at 21 Ill. Reg. 1671, effective December 1, 1997; amended at 22 Ill. Reg. _____, effective _____.

Section 4405.10 Authority

This Part is promulgated by the Director of Insurance of the State of Illinois ~~pursuant~~ to implement Section 1A-109 which requires all Pension Funds to file an annual statement with the Department of Insurance. Section 1A-103 ~~22-501.1~~ of the Illinois Pension Code ~~which~~ empowers the Director to *promulgate rules necessary for the administration and enforcement of the Illinois Pension Code* ~~*...make reasonable rules and regulations...as may be necessary for making effective and implementing the provisions of the Pension Code...*~~ [40 ILCS 5/1A-103 ~~22-501.1~~]. ~~Further authority is granted through the Division's requirement of accepting annual reports from all pension funds (see 40 ILCS 5/22-503).~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 4405.20 Purpose and Scope

The purpose of this Part is to prescribe the format in which the Department of Insurance will accept the filing of annual statements from all pension funds. All pension funds required to file an annual statement under Section 1A-109 of the Illinois Pension Code [40 ILCS 5/1A-109] need to file their annual statement pursuant to this Part in order to comply with Sections 1A-109 and 1A-113 of the Illinois Pension Code [40 ILCS 5/1A-109 and 1A-113]. ~~The purpose of this Part is to establish mandatory electronic filing of annual statements to the Pension Division of the Illinois Department of Insurance.~~

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~~This Part shall apply to all pensions, annuity or retirement funds or systems, which are not financed in whole or part by the State of Illinois.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

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NOTICE OF PROPOSED AMENDMENTS

1) Heading of the Part: Examination and Audit Procedure

2) Code Citation: 50 Ill. Adm. Code 4401

3)

Section Numbers:	Proposed Action:
4401.20	Amendment
4401.25	New Section
4401.30	Amendment
4401.40	Amendment
4401.50	Amendment
4401.60	Amendment
4401.70	Repeal

4) Statutory Authority: Implementing Section 1A-104 and authorized by Section 1A-103 of the Illinois Pension Code [40 ILCS 5/1A-103 and 1A-104] (see P.A. 90-507, effective August 22, 1997).

5) A Complete Description of the Subjects and Issues Involved: These amendments will revise the main authority note and other corresponding citations pursuant to P.A. 90-507, effective August 22, 1997, which repealed the majority of Division 5 of the Illinois Pension Code and replaced it with Article 1A. These amendments will also clarify existing provisions by adding definitions and a provision that allows the Department to accept a report of audit or exam of a pension fund from a certified public accountant.

6) Will this proposed amendment replace an emergency rule currently in effect? No

7) Does this amendment contain an automatic repeal date? No

8) Does this proposed amendment contain incorporations by reference? No

1) Are there any other proposed amendments pending on this Part? No

10) Statement of Statewide Policy Objectives: These amendments will not require a local government to establish, expand or modify its activities in such a way as to necessitate additional expenditures from local revenues.

11) Time, Place, and Manner in which interested persons may comment on this proposed rulemaking: Persons who wish to comment on this proposed rulemaking may submit written comments no later than 45 days after the publication of this Notice to:

Chuck Feinen
Staff Attorney
Department of Insurance

Mary Meyer
Paralegal
Department of Insurance

DEPARTMENT OF INSURANCE

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320 West Washington (or) 320 West Washington
Springfield, IL 62767 Springfield, IL 62767
217-782-2867 217-785-8220

12) Initial Regulatory Flexibility Analysis:

A) Types of small businesses, small municipalities and not for profit corporations affected: None

B) Reporting, bookkeeping or other procedures required for compliance: None

C) Types of professional skills necessary for compliance: None

13) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the two most recent agendas because: The Department did not anticipate the repeal of Division 5 of the Illinois Pension Code.

The full text of the Proposed Amendments begins on the next page:

DEPARTMENT OF INSURANCE

NOTICE OF PROPOSED AMENDMENTS

TITLE 50: INSURANCE
CHAPTER I: DEPARTMENT OF INSURANCE
SUBCHAPTER aaa: PENSIONS

PART 4401
EXAMINATION AND AUDIT PROCEDURE

Section
4401.10 Purpose
4401.20 Applicability
4401.25 Definitions
4401.30 Pre-Audit and Examination Procedures
4401.40 Audit and Examination
4401.50 Post-Audit and Examination Procedures
4401.60 Audit and Examination Hearings
4401.70 Compliance (Repealed)

AUTHORITY: Implementing Section 1A-104 and authorized by Section 1A-103 of the Illinois Pension Code [40 ILCS 1A-103 and 1A-104] (see P.A. 90-507, effective August 22, 1997).

SOURCE: Adopted at 21 Ill. Reg. 1675, effective January 28, 1997; amended at 22 Ill. Reg. _____, effective _____.

Section 4401.20 Applicability

This Part shall apply to *all pension funds established* ~~Article--Three--and--4 pension,--annuity-or-retirement-funds-or-systems~~ under the ~~regulatory-authority of-the-Department-of-Insurance,-which-are-not-financed-in-whole-or-in--part--by funds--of--the--State--of--Illinois,-pursuant-to-Section-22-501-of-the~~ Illinois Pension Code *and maintained for the benefit of employees and officers of governmental units in the State of Illinois* [40 ILCS 5/1A-104] ~~[40-ILCS 5/22-501]~~.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 4401.25 Definitions

Accountant means an independent certified public accountant or independent accounting firm in good standing with the American Institute of CPA's and all states in which the accountant is licensed to practice.

Department means *the Department of Insurance of the State of Illinois* [40 ILCS 5/1A-102] (see P.A. 90-507, effective August 22, 1997).

Division means *the Public Pension Division of the Department of*

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NOTICE OF PROPOSED AMENDMENTS

Insurance [40 ILCS 5/1A-102] (see P.A. 90-507, effective August 22, 1997).

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 4401.30 Pre-Audit and Examination Procedures

a) Pursuant to Section 1A-104 ~~22-502~~ of the Illinois Pension Code [40 ILCS 5/1A-104~~22-502~~], each pension fund or retirement system under the Illinois Pension Code shall be subject to periodic examinations or audits on behalf of the Illinois Department of Insurance.

b) Notification of an impending examination or audit will be given through the issuance of a "Warrant of Examiners." This Warrant of Examiners shall state the name of the pension fund or retirement system which will be examined, and will identify the examiner appointed to perform the examination or audit.

c) The Warrant of Examiners may also be accompanied by a letter, which shall set a tentative date for a review of the books and other documentation, as well as a request for materials which are to be sent by the pension fund or retirement system to the attention of the examiner within 14 days after receipt of said letter. In preparing for the examination or audit, the Division's ~~Department--of--Insurance~~ examiner shall have access to all books, records, files, documents and other relevant materials deemed necessary by the Division ~~Department of Insurance~~ to assist in the completion of such examination or audit.

d) All requests for an extension of time in providing the requested documents shall be sent to the examiner listed in the warrant at least seven business days before the scheduled deadline. One extension of time shall be granted automatically for a period of up to 30 days. Thereafter, requests for extension shall only be granted for good cause.

e) Pursuant to Section 1A-104 of the Illinois Pension Code [40 ILCS 5/1A-104], the Division may accept and rely upon a report of audit or examination of any pension fund or retirement system made by a certified public accountant in lieu of making an examination and investigation. Upon receipt of notification of the impending examination pursuant to Section 4401.30 of this Part, a pension fund may file with the Division a certified public accountant examination for its consideration in lieu of conducting the examination. The Division shall notify the pension fund in writing of its intention to conduct or cancel the impending examination. *The acceptance of the report of audit or examination does not bar the Division from making a further audit, examination, and investigation if deemed necessary by the Division* [40 ILCS 5/1A-104].

(Source: Amended at 22 Ill. Reg. _____, effective _____)

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Section 4401.40 Audit and Examination

a) All audits and examinations, except under special circumstances (such as the need to expeditiously focus on a single issue, that has been brought to the attention of the Division ~~Department~~, or an examination of a small fund, where the cost and time used to travel to the site is excessive in comparison to the time spent and information actually obtained), shall be made on site, to insure that all books, documents and other relevant procedures can be made readily available to the examiner. During the audit or examination, the examiner may look at all aspects of the pension fund's or retirement system's business. This includes verification of the existence of administrative rules, policies and procedures, verification of the participants in the fund and all information related to the participants, business affairs and expenditures of the pension board, including pension payments and investment holdings and procedures, the appointment and election of trustees, as well as any other relevant issues or procedures.

b) Desk audits will be performed for each fund, following the timely submission of the annual statement filing. In addition, desk audits may be performed at any time on a pension fund.

c) Situations may arise which require the Division ~~Department~~ to perform special examinations. These examinations are limited by the Division to specific areas of concern ~~by the Department~~. The authority of the examiner when conducting a special examination shall be the same authority which is granted to the examiner in the performance of a general or full examination or audit.

d) The majority of the audits and examinations will be performed directly by members of the Division ~~Department of Insurance Pension Division's staff~~. However, in the event that an outside auditor or examiner is hired, such person shall be given all the rights and powers held by an employee of the Division ~~Department of Insurance~~.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 4401.50 Post-Audit and Examination Procedures

a) Following an examination or audit, the examiner may request further information be provided by the pension fund or retirement system. Such information shall be provided within two weeks or within the time frame agreed to by the pension fund or retirement system and the Division ~~Department--of-Insurance~~. At any time, the ~~Pension~~ Division may refer investigatory information to the Illinois Attorney General's Office.

b) Once all relevant information has been received and reviewed, the examiner will prepare a written report detailing the status of the pension fund's or retirement system's compliance with the policies, procedures and laws applicable to it. This report shall be known as

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the report of examination. A copy of the report of examination will be sent to the secretary of the pension fund or retirement system. The fund will then have 30 days after the date of receipt of the report to review it and make any request for a hearing based on the facts contained in the examination report.

c) After 30 days, if no hearing is requested, the examination report shall be officially filed with the Department ~~of Insurance~~ and the contents shall thereafter be considered public information. At this time an order shall be entered by the Director of Insurance which requires compliance where it is determined that the pension fund or retirement system has violated the policies, procedures and laws of the State of Illinois. In response, action must be taken to comply with the findings of the examination report as detailed in the order or within 15 business days, whichever period is shorter.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 4401.60 Audit and Examination Hearings

a) Hearings requested pursuant to this Part are limited to the accuracy of the facts contained in the report of examination.

b) All requests for a hearing shall be made in writing and delivered to the Pension Division of the Illinois Department of Insurance. Such request shall be received within 30 days after the day that the pension fund or retirement system received the report of examination. Such requests shall identify the specific findings that are in dispute.

c) Once a timely request is received by the Division ~~Department~~, the Division ~~Department~~ will issue a notice of hearing. All hearings will be scheduled to be held no sooner than 20 days, but no later than 30 days, after receipt of the request, and will be held in the offices of the Department ~~of Insurance~~.

d) All hearings will be conducted in accordance with Illinois Administrative Hearing Procedures as outlined in 50 Ill. Adm. Code 2402.

e) The Director will issue a written order following the hearing. If the Director's decision finds noncompliance, the procedures of 50 Ill. Adm. Code 4435, Noncompliance Notification and Penalties, will be followed. If the Director's decision finds compliance, the audit and examination report will be rewritten in accordance with the Director's order.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 4401.70 Compliance (Repealed)

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NOTICE OF PROPOSED AMENDMENTS

~~a) The findings of the Director of Insurance will be made public in a written order following the hearing. The findings will indicate whether or not an order of compliance is necessary. The order of compliance may be made part of the Director's final order in the hearing. Compliance with this order shall be performed within the time-frame specified in the order; however, the time-frame should not exceed 15 business days following the entrance of the order.~~

~~1) The Director of Insurance may, at his/her discretion, give written notice to the governing body, officer or official of the pension fund or retirement system of specific matters or issues wherein non-compliance is alleged.~~

~~2) If the Director of Insurance does not receive evidence that compliance has been achieved within the 15 days following receipt of the notice, then an order to show cause shall be issued to the governing body, officer or official.~~

~~3) The Order to Show Cause shall be accompanied by a Notice of Hearing, setting forth a hearing date. The Director of Insurance shall issue an order of his/her findings. If noncompliance continues, orders may be issued and fines may be assessed pursuant to 40 ILCS 5/22-503.~~

~~4) Compliance and evidence thereof should be delivered to the Director of Insurance within 30 days after the entrance of the order, unless the pension fund or retirement system has initiated an action for administrative review.~~

~~5) If the pension fund or retirement system is unable to meet the deadline for compliance, then the governing body, officer or official should send a certified statement to the Director of Insurance which sets forth the steps to be taken to insure full compliance and the expected day of full compliance.~~

~~b) If no action is taken to comply with the Director's Order and no action for administrative review is timely initiated, then the Director of Insurance may assess a civil penalty against the governing body, officer or official of the pension fund or retirement system. A civil penalty may also be assessed pursuant to 40 ILCS 5/22-503 if full compliance with the Director's Order is not achieved as stated within the time frame specified in the certified statement of the governing body, officer or official. This fine shall be $50 for each day in which the entity continues to be out of compliance, beyond the 30-day time period allowed. In no event shall the amount of such civil penalty exceed $1,000 per compliance issue.~~

~~c) All fines not paid within 30 days after the assessment may, at the Director of Insurance's discretion, be turned over to the Illinois Attorney General with a request for judicial action for compliance and satisfaction.~~

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

DEPARTMENT OF PUBLIC HEALTH

NOTICE OF PROPOSED REPEALER

1) Heading of the Part: Audiometry Certification, Recertification and Calibration Standards

2) Code Citation: 77 Ill. Adm. Code 681

3)

Section Numbers:	Proposed Action:
681.10	Repealer
681.20	Repealer
681.30	Repealer
681.110	Repealer
681.120	Repealer
681.130	Repealer
681.140	Repealer
681.150	Repealer
681.160	Repealer
681.170	Repealer

4) Statutory Authority: Authorized by and implementing the Child Vision and Hearing Test Act [410 ILCS 205].

5) A Complete Description of the Subjects and Issues Involved: The Department is consolidating into one Part three sets of rules concerning hearing screening for pre-school and school age children, training requirements for hearing screening technicians and audiometer calibration standards. This consolidation will simplify the rules, eliminate redundancies, and update the rules to current standards of practice. This rulemaking repeals obsolete training and examination provisions for certification to use an audiometer and audiometer calibration standards. The other two rulemakings that are involved in the consolidation are published in this issue of the *Illinois Register*.

6) Will this Rulemaking Replace an Emergency Rule Currently in Effect? No

7) Does this Rulemaking Contain an Automatic Repeal Date? No

8) Does this Rulemaking Contain Any Incorporations By Reference? No

9) Are there any other Proposed Amendments Pending on this Part? No

10) Statement of Statewide Policy Objectives: This rulemaking does not create or expand a State Mandate.

11) Time, Place, and Manner in which Interested Persons May Comment on this Rulemaking: Interested persons may present their comments concerning these rules by writing within 45 days after this issue of the *Illinois Register* to:

Ms. Gail M. DeVito

DEPARTMENT OF PUBLIC HEALTH

NOTICE OF PROPOSED REPEALER

Division of Legal Services
Illinois Department of Public Health
535 West Jefferson, Fifth Floor
Springfield, IL 62761
(217) 782-2043
E-mail: rules@idph.state.il.us

12) Initial Regulatory Flexibility Analysis:

A) Type of Small Businesses, Small Municipalities and Not-for-Profit Corporations Affected: None

B) Reporting, Bookkeeping or Other Procedures Required for Compliance: None

C) Types of Professional Skills Necessary for Compliance: None

13) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the 2 most recent regulatory agendas because: The decision to propose this rulemaking had not been made when the Regulatory Agenda was finalized.

The full text of the Proposed Repealer begins on the next page:

DEPARTMENT OF PUBLIC HEALTH

NOTICE OF PROPOSED REPEALER

TITLE 77: PUBLIC HEALTH
CHAPTER I: DEPARTMENT OF PUBLIC HEALTH
SUBCHAPTER j: VISION AND HEARING

PART 681
AUDIOMETRY CERTIFICATION, RECERTIFICATION AND CALIBRATION STANDARDS
(Repealed)

SUBPART A: STANDARDS FOR AUDIOMETRY CERTIFICATION AND RECERTIFICATION

Section
681.10 Introduction
681.20 Standards for Audiometry Certification
681.30 Standards for Audiometry Recertification

SUBPART B: AUDIOMETER CALIBRATION STANDARDS

Section
681.110 Introduction
681.120 Definitions
681.130 Periodicity of Calibration Checks
681.140 Method for Delivery of Calibration Check Services
681.150 Audiometer Calibration Measurements
681.160 Criteria for Audiometer Acceptability
681.170 Record of Calibration Check

AUTHORITY: Implementing and authorized by the Child Vision and Hearing Test Act [410 ILCS 205].

SOURCE: Adopted July 1, 1976; codified at 8 Ill. Reg. 16830; repealed at 22 Ill. Reg. _____, effective _____.

SUBPART A: STANDARDS FOR AUDIOMETRY CERTIFICATION AND RECERTIFICATION

Section 681.10 Introduction

a) The Illinois Department of Public Health is the responsible agency for establishing, coordinating and maintaining hearing screening programs throughout the State. Due in part to the philosophy of the hearing conservation staff of the Department, legislation has been enacted which mandates all aspects of a comprehensive hearing conservation program. One section includes the utilization of uniform criteria through individuals trained for that specific purpose by the Illinois Department of Public Health. All individuals involved in a hearing screening program must have successfully passed an audiometric workshop. Hence, the Department provides several workshops per year in various locations throughout the State to enable trainees to obtain a valid certificate in audiometry. In addition, procedures for

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NOTICE OF PROPOSED REPEALER

recertification of an individual have been established, due to the belief that it is necessary to periodically reexamine and evaluate the effectiveness of our training program and the competency of the certified personnel.

b) The following standards define the certification and recertification procedures for obtaining and maintaining an Audiometry Certificate.

Section 681.20 Standards for Audiometry Certification

To obtain a valid certificate in audiometry as defined by the Illinois Department of Public Health, certification is contingent on the following:

a) full attendance at all three portions (lecture, practicum, and follow-up) is mandatory. There will be no excused absences due to the sequence and continuity of the materials covered.

b) successful completion of a written examination at the conclusion of the lecture series. A score of 75% or greater must be obtained, or the trainee will be required to attend an additional lecture series prior to attendance at a practicum and follow-up workshop.

c) demonstration of proficiency at an audiometry practicum. This phase includes: The ability to instruct and test children; the ability to recognize screening failures and referrals; and the ability to successfully organize and maintain a hearing screening program. Failure to successfully demonstrate proficiency at the practicum portion of the workshop will result in the trainee being categorized into one of the following groups:

1) "pass with further supervision" - this category will allow the trainee to attend the follow-up workshop and pass the course after demonstration of proficiency through an additional supervisory visit(s) by the Regional Hearing Consultant;

2) "failure to demonstrate proficiency" - this category indicates the trainee did not meet expectations and will not be certified to perform audiometric testing. In the event the trainee or the supervisor of the trainee fails to recognize the unsuccessful completion of the course, or disagrees with the decision, a meeting will be held to review the situation and to make a final decision. The following individuals will attend this meeting: The Hearing Conservation Coordinator, the Training Supervisor, the Regional Hearing Consultant, and the trainee's supervisor. A trainee who fails the course will be invited to attend an additional workshop (the same as the first) in that the Department will provide every opportunity for a trainee to successfully complete the requirements.

Section 681.30 Standards for Audiometry Recertification

a) In accordance with the rules of the Child Vision and Hearing Test Act, a certificate in Audiometry is valid for a period of three years. Hence, attendance at a recertification workshop every three years is

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mandatory for an audiometrist to maintain a valid certificate.

b) The following regulations clarify the standards for maintaining a valid certificate:

1) An audiometrist must attend and successfully complete a recertification workshop every three years to receive a renewal certificate valid for that period of time. Failure to do so will result in expiration of the certificate. The workshop will include a written and practical demonstration of proficiency. The only exception is as follows: in the event a certified audiometrist is unable to attend a regularly scheduled recertification workshop and has a valid excuse, a grace period of 12 months shall be extended to the audiometrist. If the audiometrist does not complete a workshop within this 12 month period of time, the certificate will expire and will no longer be considered valid.

2) A questionnaire will be sent each year to those audiometrists whose certificates expire during that year. In the event an audiometrist does not wish to maintain certification status, he or she may so indicate on the questionnaire and they will be removed from the files.

3) An audiometry certificate will be removed by the Department if the audiometrist fails to comply to the rules of the Child Vision and Hearing Test Act, or if they fail to demonstrate proficiency in the area of audiometry. The removal of a certificate will be handled in the same manner as under Section 681.20 (c)(2) of this Part.

4) In the event a certificate is removed or expires without valid reason, a person must complete all portions of the training course to be reinstated as a certified audiometric technician.

5) The procedure for changing a person's name, removing a deceased person's name from the mailing, or any other changes on the certificate, shall be initiated by the regional consultant contacting the central office and forwarding the appropriate information to them. The Training Course Supervisor shall be responsible for notifying Data Processing of the necessary changes.

SUBPART B: AUDIOMETER CALIBRATION STANDARDS

Section 681.110 Introduction

In accordance with the rules of the Child Vision and Hearing Test Act, the Illinois Department of Public Health Hearing Conservation Program will administer a program of audiometer calibration standards. All portable audiometers used in screening programs for children in Illinois are covered by these standards. The Illinois Department of Public Health is the responsible agency for establishing these standards and for administering the necessary programs to insure compliance.

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Section 681.120 Definitions

ANSI - American National Standards Institute

Audiometer - Any portable pure tone audiometer used in a mass screening program or as part of the monitoring follow-up testing or by speech clinicians as part of a pre-school or school hearing testing program.

Calibration Check - Activities related to the electroacoustic measurement of the audiometer in evaluation of its function.

Correction Card - A numerical correction factor which is attached to the audiometer indicating the output error and the required correction values.

Factory Calibration - The process of changing the audiometer output by means of internal repairs. This process is accomplished by the audiometer manufacturer or an established repair laboratory.*

AGENCY NOTE: *In some cases, the Regional Hearing Consultant will provide necessary minor repairs.

Frequency Count - The measurement of the frequency output for each frequency in each earphone measured in Hertz or cycles per second.

ISO - International Standards Organization.

Linearity Check - The measurement of attentuator linearity.

Sound Pressure Level (SPL) - A direct physical measurement of intensity in decibels.

Section 681.130 Periodicity of Calibration Checks

All audiometers used in screening programs will be tested with an electroacoustic coupler and sound level meter twice during each calendar year, preferably at six-month intervals near the beginning of their use in a mass screening program and at the mid-point of such a program.

Section 681.140 Method for Delivery of Calibration Check Services

The Illinois Department of Public Health will administer a program of calibration check services through the regional offices. The regional staff will disseminate notification to all screening programs regarding the locations and dates for these services. Check clinics will be strategically located so as to reduce required travel time for local programs. The local programs will be required to transport the audiometers to and from these check sites.

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Section 681.150 Audiometer Calibration Measurements

Each audiometer checked will undergo the following measurements:

a) Sound Pressure - Sound pressure will be measured for each octave frequency - 250 Hz through 8000 Hz - for each earphone. The ANSI reference for pure tone audiometers will be used for both ISO and ANSI calibrated instruments. The acceptable range of deviation will follow the ANSI Standards.

b) Frequency Count - Each octave frequency - 250 Hz through 8000 Hz - will be measured. The ANSI standards for acceptable frequency deviations will be used.

c) Linearity Check - The attenuator linearity will be measured for one earphone at 2000 Hz. Linearity deviations will be measured in 10dB increments from 110 dB to the minimum achievable level in relationship to ambient noise.

d) Subjective Checks - Several subjective checks of the audiometer condition and function will be made following each output check. These checks include: check for extraneous noise in the attenuator and frequency controls, a check of the earphones, cushions, cords, and a check of the condition of the headband.

Section 681.160 Criteria for Audiometer Acceptability

a) The following conditions found in an audiometer will necessitate factory calibration and/or repairs.

1) When the sound pressure in any one or more frequencies, in either earphone, deviates by more than 10dB from the reference point.

2) Any sound pressure level deviation from the acceptable ANSI range in the frequencies 500, 1000, 2000, and 4000 Hz in either earphone.

3) A frequency count which deviates from the acceptable ANSI range at any frequency.

4) A lack of acceptable attenuator linearity.

5) Noise in the attenuator or frequency selector which might interfere with test presentations.

6) "Scratching sounds" or "cut-outs" caused by broken earphone cords.

b) In the following condition, an audiometer can continue to be used in a screening program if a correction card is used:

When a deviation of no greater than 10dB exists, at the frequencies of 250 Hz and/or 8000 Hz only, in either earphone. In this case, a correction card is attached to the audiometer and the indicated correction factor is applied when the unit is used.

Section 681.170 Record of Calibration Check

a) The results of each audiometer checked by the Department will be recorded in a regional office, and a copy of the results will be

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placed within the audiometer. This form is designated as the "audiometer calibration check worksheet" and is intended to instruct the owner regarding the appropriate action following the check. Each audiometer calibration worksheet should be maintained with the audiometer and when factory calibration is indicated, the worksheet must accompany the audiometer to the repair facility to indicate the instrument malfunction.

b) A calibration correction card, with the date of calibration checks, will be affixed to all units checked. If no deviation exist, the card will indicate that the instrument is "ok", and will be signed by the Public Health Consultant who performed the check service.

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NOTICE OF PROPOSED AMENDMENTS

1) Heading of the Part: Grade A Pasteurized Milk and Milk Products

2) Code Citation: 77 Ill. Adm. Code 775

3) Section Numbers: Proposed Action:
775.20 Amendments

4) Statutory Authority: Implementing and authorized by the Grade A Pasteurized Milk and Milk Products Act [410 ILCS 635].

5) A Complete Description of the Subjects and Issues Involved:

This rulemaking will update references to several documents that are incorporated by reference in the Grade A Pasteurized Milk and Milk Products rules. Documents that are being updated include the Grade A Pasteurized Milk Ordinance (PMO) and the Grade A Condensed and Dry Milk Ordinance (DMO), both published by the FDA, and the Standard Methods for the Examination of Dairy Products, published by the American Public Health Association.

Key changes to the 1995 edition of the PMO include two new appendices that provide additional information and recommendations regarding vitamin fortification of Grade A dairy products and performance-based farm inspections as follows:

Appendix O - "Vitamin Fortification of Fluid Dairy Products" provides background information on fortification of dairy products with Vitamins A and D, which has long been a standard practice in the dairy industry. The Appendix specifies recommendations for methods of vitamin addition, the use and evaluation of metering pumps, and the methods of testing for levels of vitamin fortification.

Appendix P - "Performance-Based Dairy Farm Inspection System" provides an alternative inspection system to the traditional routine inspection frequency of Grade A dairy farms. In the alternative system the inspection frequency is based on producer milk quality and inspection performance.

In addition, the 1995 revision reorders inspection items for Grade A dairy farms to put more emphasis on direct public health issues. Although the sanitation requirements have not changed, the numbering system has been adjusted to reflect the new emphasis. The DMO has been rewritten and updated, in the 1995 revision, to mirror the Grade A PMO, which it supplements. Pasteurization requirements have been updated and appendixes from the PMO have been reprinted in the DMO to bring the DMO into uniformity.

Modifications in the 16th edition of the Standard Methods for the

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Examination of Dairy Products update the document to keep pace with rapidly changing technology. Changes of major impact include the approval of additional screening tests for drug residue testing.

6) Will this Rulemaking Replace an Emergency Rule Currently in Effect? No

7) Does this Rulemaking Contain an Automatic Repeal Date? No

8) Does this Rulemaking Contain Any Incorporations By Reference? No

9) Are there any other Proposed Amendments Pending on this Part? No

10) Statement of Statewide Policy Objectives: This rulemaking does not create or expand a State Mandate.

11) Time, Place, and Manner in which Interested Persons May Comment on this Rulemaking: Interested persons may present their comments concerning these rules by writing within 45 days after this issues of the *Illinois Register* to:

Ms. Gail M. DeVito
Division of Legal Services
Illinois Department of Public Health
535 West Jefferson, Fifth Floor
Springfield, IL 62761
(217) 782-2043
E-mail: rules@idph.state.il.us

12) Initial Regulatory Flexibility Analysis:

A) Type of Small Businesses, Small Municipalities and Not-for-profit Corporations Affected: None

B) Reporting, Bookkeeping or Other Procedures Required for Compliance: None

C) Types of Professional Skills Necessary for Compliance: None

13) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the most 2 recent Regulatory Agendas because: The need for the rulemaking was not apparent when the Regulatory Agenda was finalized.

The full text of the Proposed Amendments begins on the next page:

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NOTICE OF PROPOSED AMENDMENTS

TITLE 77: PUBLIC HEALTH
CHAPTER I: DEPARTMENT OF PUBLIC HEALTH
SUBCHAPTER m: FOOD, DRUGS AND COSMETICS

PART 775
GRADE A PASTEURIZED MILK AND MILK PRODUCTS

Section
775.1 Minimum Regulations(Renumbered)
775.10 Definitions
775.20 Incorporated Materials
775.30 Minimum Requirements
775.40 Local Government Implementation
775.50 Permits
775.60 Suspension of Permits
775.70 Inspections and Investigations
775.80 Approval of Construction Plans
775.90 Administrative Hearings
775.100 Milk Haulers Examination
775.110 Milk Tank Trucks
775.120 Cleaning and Sanitizing Procedures
775.130 Action levels for Added Water in Milk
775.140 Pesticide, Herbicide and Mycotoxin Residue Control Program
775.150 Drug Residue Control Program

AUTHORITY: Implementing and authorized by the Grade A Pasteurized Milk and Milk Products Act [410 ILCS 635].

SOURCE: Adopted and codified at 8 Ill. Reg. 4190, effective March 16, 1984; amended at 11 Ill. Reg. 1464, effective February 1, 1987; amended at 12 Ill. Reg. 17925, effective December 1, 1988; amended at 17 Ill. Reg. 14015, effective August 15, 1993; amended at 19 Ill. Reg. 12271, effective August 10, 1995; amended at 22 Ill. Reg. _____, effective _____.

Section 775.20 Incorporated Materials

a) The following materials are incorporated or referenced in this Part:
1) The Grade A Pasteurized Milk Ordinance (PMO), Part II and Appendixes A through P ~~N---as-amended-in-1991~~ (except Sections ~~Section~~ 16 and 17) (1995) ~~1989~~ Recommendations of the United States Public Health Service/Food and Drug Administration (Publication 229)~~.~~. In addition, the jurisdiction name, left blank in Sections 1, 2 and 11 of the PMO, for the purposes of this Part, shall mean the State of Illinois; and the regulatory agency referred to in Section 1~~,~~ shall mean the Illinois Department of Public Health. See Section 775.30(a).
2) The Grade A Condensed and Dry Milk Ordinance, 1995 Revision, Part II and Appendixes A through N (~~The~~ Grade A Condensed and Dry Milk

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Products and Condensed and Dry Whey - Supplement I to the Grade A Pasteurized Milk Ordinance, 1995 Recommendations). ~~Part-II-and-Appendixes-A-through-J-(1970-Recommended-Sanitation-Ordinance-for-Condensed-and-Dry-Milk-Products-and-Condensed-and-Dry--Milk--Whey-Used---in--Grade--A--Pasteurized--Milk--Products)~~. See Section 775.30(b).
3) The Standard Methods for the Examination of Dairy Products (16th ~~15th~~ Edition, 1992 ~~1985~~, American Public Health Association, 1015 - 18th Street, N.W., Washington, D.C. 20036~~.~~). See Section 775.70(b).
4) Official Methods of Analysis of the Association of Official Analytical Chemists (15th Edition, 1990, Association of Official Analytical Chemists, P.O. Box 540, Ben Franklin Station, Washington, D.C. 20044~~.~~). See Section 775.70(b).
5) 21 CFR 131.110~~.~~ (1991). (See Section 775.10, the definition of "Milkfat and Nonfat Solid Content Standards.")~~.~~
6) Illinois Plumbing Code - 77 Ill. Adm. Code 890, Illinois Department of Public Health. (See Section 775.30(c)(4).)~~.~~
7) Minimum Qualifications for Public Health Personnel Employed by Full-time Local Health Departments - 77 Ill. Adm. Code 600.700 to 600.740, Illinois Department of Public Health. (See Section 775.740~~.~~.)
8) Rules of Practice and Procedure in Administrative Hearings - 77 Ill. Adm. Code 100, Illinois Department of Public Health. (See Section 775.90~~.~~.)
9) 21 CFR 556 (1991). (See Section 775.10, the definition of "Violative Drug Residue"~~.~~.)
10) The Veterinary Medicine and Surgery Practice Act of 1983 ~~(111.-Rev.-Stat.-1991,-ch.-111,-pars.-7001-et-seq.)~~ [225 ILCS 115].

b) All incorporations by reference refer to the materials on the date specified and do not include any additions or deletions subsequent to the date specified.
c) All citations to federal regulations in this Part concern the specified regulation in the 1991 Code of Federal Regulations, unless another date is specified.
d) Copies of all incorporated materials are available for inspection and copying by the public at the Department's Central Office, Division of Food, Drugs, and Dairies, 525 West Jefferson Street, Springfield, Illinois 62761.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

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1) Heading of the Part: Hearing Screening

2) Code Citation: 77 Ill. Adm. Code 675

3)

Section Numbers:	Proposed Action:
675.10	Amendment
675.20	Amendment
675.30	New Section
675.100	Amendment
675.110	Amendment
675.120	Amendment
675.140	Amendment
675.200	Amendment
675.210	New Section
675.220	New Section
675.230	New Section
675.240	New Section
675.250	New Section
675.300	New Section

4) Statutory Authority: Authorized by and implementing the Child Vision and Hearing Test Act [410 ILCS 205].

5) A Complete Description of the Subjects and Issues Involved: The Department is consolidating into one Part three sets of rules concerning hearing screening for pre-school and school age children, training requirements for hearing screening technicians and audiometry calibration standards. This consolidation will simplify the rules, eliminate redundancies, and update the rules to current standards of practice. This rulemaking sets fees for training courses, certification, replacement certificate, and audiometer calibration check. The other two Parts that are involved in the consolidation are proposed for repeal in this issue of the *Illinois Register*.

6) Will this Rulemaking Replace an Emergency Rule Currently in Effect? No

7) Does this Rulemaking Contain an Automatic Repeal Date? No

8) Does this Rulemaking Contain Any Incorporations By Reference? No

9) Are there any other Proposed Amendments Pending on this Part? No

10) Statement of Statewide Policy Objectives: This rulemaking does not create or expand a State Mandate.

11) Time, Place, and Manner in which Interested Persons May Comment on this Rulemaking: Interested persons may present their comments concerning these rules by writing within 45 days after this issue of the *Illinois*

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Register to:

Ms. Gail M. DeVito
Division of Legal Services
Illinois Department of Public Health
535 West Jefferson, Fifth Floor
Springfield, IL 62761
(217) 782-2043
E-mail: rules@idph.state.il.us

12) Initial Regulatory Flexibility Analysis:

A) Type of Small Businesses, Small Municipalities and Not-for-Profit Corporations Affected: None

B) Reporting, Bookkeeping or Other Procedures Required for Compliance: None

C) Types of Professional Skills Necessary for Compliance: None

13) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the 2 most recent Regulatory Agendas because: The decision to propose this rulemaking had not been made when the Regulatory Agenda was finalized.

The full text of the Proposed Amendments begins on the next page:

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NOTICE OF PROPOSED AMENDMENTS

TITLE 77: PUBLIC HEALTH
CHAPTER I: DEPARTMENT OF PUBLIC HEALTH
SUBCHAPTER j: VISION AND HEARING

PART 675
HEARING SCREENING

SUBPART A: ~~AUTHORITY;~~APPLICABILITY AND GENERAL PROVISIONS
~~DEFINITIONS~~

Section
675.10 Applicability
675.20 Definitions
675.30 Incorporated Materials

SUBPART B: STANDARDS AND~~;~~ PROCEDURES~~;-TECHNIQUES AND CRITERIA~~ FOR HEARING SCREENING

Section
675.100 Instrumentation
675.110 Frequency of Screening
675.120 Identification Audiometry
675.130 Referral Criteria
675.140 Referral

SUBPART C: GENERAL STANDARDS ~~FOR TRAINING~~ AND QUALIFICATIONS OF ~~FOR~~ PERSONNEL PROVIDING ~~TO PROVIDE~~ HEARING SCREENING SERVICES

Section
675.200 Screening Personnel
675.210 Application for Training and Certification
675.220 Training for Hearing Screening Technicians
675.230 Certification of Hearing Screening Technicians
675.240 Recertification of Hearing Screening Technicians
675.250 Lapsed Certificates

SUBPART D: FEE STRUCTURE

Section
675.300 Fees

AUTHORITY: Authorized by and implementing the Child Vision and Hearing Test Act [410 ILCS 205].

SOURCE: Adopted and codified at 6 Ill. Reg. 10998, effective August 30, 1982; amended at 22 Ill. Reg. _____, effective _____.

SUBPART A: ~~AUTHORITY;~~APPLICABILITY AND GENERAL PROVISIONS

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~~DEFINITIONS~~

Section 675.10 Applicability

a) The Child Vision and Hearing Test Act authorizes the Department to administer a program of hearing screening services for Illinois children. The Act requires hearing screening services be administered to all children by certified hearing screening technicians. This Part applies ~~These rules apply~~ to hearing screening services required under the ~~that~~ Act.

b) The Department shall delegate responsibility to other State agencies, local health departments, school districts, or other community agencies~~;~~ to develop and maintain periodic vision and hearing screening services. The Department shall make such delegations in conformance with existing services and with the approval of the entity receiving the delegation.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 675.20 Definitions

As used in this Part ~~these rules~~, the terms defined in this Section ~~section~~ shall have the meanings ascribed to them herein.

"Act" means the Child Vision and Hearing Test Act [410 ILCS 205].

"Department" means the Illinois Department of Public Health.

"Educational screening" means a review of the student's current grade placement; classroom functioning level; achievement scores; teacher's rating of classroom performance regarding attention and concentration, reading, arithmetic, spelling, oral language and written language skills; and teacher's description of oral and written language performance, ability to hear in the classroom, and speech development.

"Hearing screening services" means on-going programs of: community ~~Community~~ education regarding the identification, prevention, cause, nature and effects of hearing impairments, program planning, management, evaluation, reporting, identification ~~Identification~~ audiometry, ~~and~~ referral, and follow-up ~~Referral~~ procedures.

"Physician" means a physician licensed in Illinois to practice medicine in all of its branches.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

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Section 675.30 Incorporated Materials

a) The following document is incorporated in this Part:

ANSI S-3.6 1989 (ASA81)
Specification for Audiometers
American National Standards Institute
1430 Broadway
New York, New York 10018, or
ASA Standards Distribution Center
1650 Bluegrass Lakes Parkway
Alpharetta, GA 30239-6996

b) This incorporation by reference refers to the materials on the date specified.

c) Copies of the incorporated document are available for inspection and duplication by the public at the Department's Central Office, Office of Health and Wellness, Division of Health Assessment and Screening (535 West Jefferson Street, Springfield, Illinois 62761).

(Source: Added at 22 Ill. Reg. _____, effective _____)

SUBPART B: STANDARDS, AND PROCEDURES, ~~TECHNIQUES AND CRITERIA~~ FOR HEARING SCREENING

Section 675.100 Instrumentation

a) Pure-tone audiometers utilized for identification audiometry must comply with minimum specifications established by the American National Standards Institute as published in the American National Standard Specifications for Audiometers. (ANSI S - 3.6 1989 (ASA81)). ~~(ANSI--53.6-1969)~~

b) Pure-tone audiometers utilized for identification audiometry must undergo an electro-acoustic coupler calibration check a minimum of once per calendar year. The electro-acoustic calibration check shall include the following measurements:
   1) frequency count;
   2) attenuator linearity; and
   3) earphone sound pressure level output.

c) An annual ~~This~~ calibration check services program may be ~~service-is-to be-supervised-and~~ provided or authorized ~~through-programs-developed~~ by the Department, ~~as--provided--for--in--the--Department's--Audiometer Calibration-Standards-which-are-on-file-with-the-Secretary-of-State~~.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

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Section 675.110 Frequency of Screening

a) Hearing screening services shall be provided annually for all preschool children three years of age or older in any public or private educational program or licensed child care center ~~facility~~.

b) Hearing screening services shall be provided annually for all school age children who are: in grades K (Kindergarten), 1, 2, and 3; in all special education classes; referred by teachers; and transfer students. Such screening services shall be provided in all public, independent, private and parochial schools ~~shall-be-provided-annually for-all-children-in-grades-kindergarten,-1,-2,-and-3,-and-after--grade 3--for--teacher--referrals--and-students-transferring-into-schools-who have-not-been-previously-screened~~.

c) In lieu of the screening services required in subsections ~~paragraphs~~ (a) and (b) of this Section ~~section~~; a completed and signed report form, indicating an ~~a-professional~~ ear examination by a physician licensed to practice medicine in all of its branches has been administered within the previous ~~not-over~~ 12 months ~~previously,--is acceptable~~.

~~d) Hearing---screening--services--in--public,--independent,--private--and parochial-schools-shall-be-provided-annually-for-all-special-education children-screened-using-screening-methods-contained-in-Section-675.120 of-these-rules.~~

d)~~e)~~ The parent or legal guardian of a student may object to hearing screening tests for their child ~~children~~ on religious grounds. If a religious objection is made, a written and signed statement from the parent or legal guardian detailing such objections must be presented to the local school authority. ~~General--philosophical--or--moral reluctance-to-allow-hearing-screening-will-not--provide--a--sufficient basis-for-an-exception-to-statutory-requirements.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 675.120 Identification Audiometry

a) Screening Procedures
   1) For the screening stage of identification audiometry, the following pure-tone frequencies and intensity levels shall be used:

Test Frequencies in Cycles Per Second	Screening Levels in Decibels
500 Hz	25 dB
1000 Hz	25 dB
2000 Hz	25 dB
4000 Hz	25 dB

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2) If a child fails to hear any tone at 25 dB, ~~you--should immediately--raise~~ the level should be raised to 35 dB and presented ~~present-it~~ again to the child. If the child responds at the 35 dB level, proceed ~~move-on~~ to the next test frequency and present the tone at 25 dB. In the event the child's condition is such that recommended screening procedures are not applicable, the child should receive alternative services if the child is considered at risk for hearing difficulties.

b) Pass - Fail Criteria

1) A child is considered to have "failed" the screening test, if he or she:

A) fails to hear any tone at 35 dB in either ear; or

B) fails to hear any two tones at 25 dB in the same ear.

2) Children "failing" the screening test must ~~should~~ be given a second screening identical to the first and judged by the same criteria. The second screening should occur 10 to 14 days after ~~within-two-weeks-of~~ the first screening test. Those children who fail the second screening must ~~should~~ then have a threshold test.

c) Threshold Test Procedures

It is recommended that the right ear be tested first. Always begin testing at 1000Hz. After determining threshold at 1000 Hz, continue with the following frequencies: 2000, 4000, 8000, 500 and 250 Hz. Then switch to the opposite ear and repeat the entire procedure at 1000, 2000, 4000, 8000, 500 and 250 Hz.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 675.140 Referral

a) Medical examination ~~evaluation~~ must be immediately recommended in written form to the parents or guardians of all children who meet the referral criteria specified in Section 675.130 as a result of threshold screening testing. The names of such children shall be reported ~~The--referral--criteria--is--set-forth-in-Section-675.130-of these-rules.---These-same-children-must-be-made--known~~ to the local education agency (LEA) or its designee for educational screening, including audiological review.

b) The screening agent or its designee shall initiate recommendations for medical examination ~~evaluation~~ and educational screening and shall coordinate those activities necessary to complete medical management of the child suspected of a hearing impairment.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

SUBPART C: GENERAL STANDARDS ~~FOR-TRAINING~~ AND QUALIFICATIONS OF ~~FOR~~ PERSONNEL PROVIDING ~~TO-PROVIDE~~ HEARING SCREENING

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SERVICES

Section 675.200 Screening Personnel

Hearing screening services shall be provided by a hearing screening technician ~~trained-and~~ certified by the Department. Any person with a high school education or its equivalent who is working in or supervising, or has an agreement to work in or supervise, a school hearing screening program may apply for training. ~~A-certificate-will-be-presented-following--successful--completion of--the--course.--This-certificate-is-valid-for-a-three-year-period,-and-can-be renewed-each-three-years-by-attending--a--recertification--workshop.---A--valid certificate--in--hearing--as--defined--by--the--Department-is-contingent-on-the following:~~

~~a) Any-person-with-a-high-school--education--or--its--equivalent--who--is working--in--or-supervising-or-has-a-definite-commitment-to-work-in-or supervise-a-hearing-screening-program-may--apply--for--training.---The screening--program--must--be-for-identification-of-hearing-problems-in preschool-and-school-age-children.~~

~~b) Full-attendance-at-the-hearing-course-is-mandatory.~~

~~c) Successful-completion-of-a-written-examination-at--the--conclusion--of the--lecture--series.---A--score--of--75--percent--or--greater-must-be obtained,-or-the-trainee-will-be-failed.~~

~~d) Demonstration-of-proficiency--at--a--hearing--practicum.---This--phase includes:---the--ability-to-instruct-and-test-children;-the-ability-to recognize--screening--failures--and--referrals;--and--the--ability--to successfully-organize-and--maintain--the--hearing--screening--program. Failure--to--successfully--demonstrate--proficiency--at--the-practicum portion-of-the-workshop-will-result-in-the-trainee--being--categorized into-one-of-the-following-groups:~~

~~1) "pass--with--further--supervision"---this-category-will-allow-the trainee-to-pass-the-course--after--demonstration--of--proficiency through--an--additional--supervisory--visit(s)--by--the--regional hearing-consultant-of-the-Department;~~

~~2) "failure-to-demonstrate-proficiency"---the-category-indicates-the trainee--did--not--meet-expectations-and-will-not-be-certified-to perform-hearing-testing.~~

~~e) Curriculum~~

~~The-training-course-involves-intensive-instruction-and-practice--time. The-curriculum-shall-include-but-is-not-limited-to-the-following:~~

~~1) Hearing-impairment-and-the-philosophy-of-hearing-conservation;~~

~~2) Basic-anatomy-and-physiology-of-the-hearing-mechanism;~~

~~3) Disorders-of-hearing;~~

~~4) Introduction-to-hearing-testing-and-test-equipment;~~

~~5) The-hearing-threshold-and-the-audiogram;~~

~~6) Hearing-screening-practicum.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

DEPARTMENT OF PUBLIC HEALTH

NOTICE OF PROPOSED AMENDMENTS

Section 675.210 Application for Training and Certification

An applicant for training and certification as a hearing screening technician shall complete and submit to the Department an Application for Training and Certification Form, provided by the Department.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 675.220 Training for Hearing Screening Technicians

a) The Department shall provide or authorize a training course to prepare persons to qualify for a hearing screening services certificate.

b) The training course for hearing screening technicians shall include, but shall not be limited to, the following topics: establishing and managing a hearing conservation program, hearing conservation for children, anatomy of the ear, disorders of hearing in children, the audiometer, physics of sound, the measurement of hearing, selecting a testing room, threshold tests, testing preschool children, testing exceptional children, and follow-up. The training course shall also include laboratory practice, practicum experience, and a written examination.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 675.230 Certification of Hearing Screening Technicians

a) The Department shall issue a certificate after the training participant:
   1) Submits the training and certification fee as required in Section 675.300;
   2) Fully attends all portions of the training course;
   3) Obtains a score of 80 percent or better on the written examination; and
   4) Demonstrates proficiency during a hearing training practicum.

b) Practicum participants will be rated on the following items: Screening, Threshold, Audiometric Skills, General Skills, and Overall Skills. All above items must be rated acceptable to qualify for certification.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 675.240 Recertification of Hearing Screening Technicians

a) A hearing screening technician certificate shall be valid for three years.

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NOTICE OF PROPOSED AMENDMENTS

b) The Department shall send expiration and renewal notices to certified persons no later than 60 days before the expiration date of the certificate. Such notices shall be sent to the last known address of the person to whom the certificate was issued.

c) The following items shall be submitted to the Department for certification renewal and shall be post-marked no later than 30 days prior to the expiration date of the certificate:
   1) a completed Certification Renewal Form;
   2) the renewal fee, as required in Section 675.300 of this Part; and
   3) Documentation of satisfactory completion of a recertification workshop provided or authorized by the Department, or a study project provided by the Department.

d) The Department shall renew the certification upon receipt of the items specified in subsections (c)(1), (2), and (3) of this Section.

e) Failure to receive a renewal notice shall not relieve the certified hearing screening technician of the obligation to submit the renewal form, pay the renewal fee 30 days prior to the expiration date of the certification, and successfully complete a recertification workshop or study project.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 675.250 Lapsed Certificate

a) Any certification not renewed prior to its expiration date shall be deemed lapsed and shall be null and void.

b) Any certification that has lapsed for a period of less than 2 years may be renewed by completing the recertification requirement and paying the fees specified in Section 675.300 of this Part.

c) Any certification that has lapsed for a period of 2 years or more may be renewed by meeting the requirements of Section 675.230 of this Part.

(Source: Added at 22 Ill. Reg. _____, effective _____)

SUBPART D: FEE STRUCTURE

Section 675.300 Fees

The Department shall implement the following fee structure:

a) Applicants shall be required to pay to the Department or its designee a fee for attending a training course. Failure to appear for training on the scheduled date, at the time and place specified, after the applicant's application and fee for training has been received and acknowledged by the Department, shall result in forfeiture of the fee.

b) The certification fee is $30 every three years.

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NOTICE OF PROPOSED AMENDMENTS

c) The fee for the issuance of a replacement certificate or a certificate with a change of name or address, other than at renewal time, is $10. No fee is required for name or address change on Department records when no duplicate or replacement certificate is issued.

d) The fee for an electro-acoustic calibration check provided by the Department is $10 for each audiometer checked.

(Source: Added at 22 Ill. Reg. _____, effective _____)

DEPARTMENT OF PUBLIC HEALTH

NOTICE OF PROPOSED REPEALER

1) Heading of the Part: Hearing Training Applicant Requirements

2) Code Citation: 77 Ill. Adm. Code 680

3)

Section Numbers:	Proposed Action:
680.10	Repealer
680.20	Repealer
680.30	Repealer

4) Statutory Authority: Authorized by and implementing the Child Vision and Hearing Test Act [410 ILCS 205].

5) A Complete Description of the Subjects and Issues Involved: The Department is consolidating into one Part three sets of rules concerning hearing screening for pre-school and school age children, training requirements for hearing screening technicians and audiometer calibration standards. This consolidation will simplify the rules, eliminate redundancies, and update the rules to current standards of practice. This rulemaking repeals obsolete eligibility, cost, and training curriculum requirements for persons making application for a training course in hearing screening. The other two rulemakings that are involved in the consolidation are published in this issue of the *Illinois Register*.

6) Will this Rulemaking Replace an Emergency Rule Currently in Effect? No

7) Does this Rulemaking Contain an Automatic Repeal Date? No

8) Does this Rulemaking Contain Any Incorporations By Reference? No

9) Are there any other Proposed Amendments Pending on this Part? No

10) Statement of Statewide Policy Objectives: This rulemaking does not create or expand a State Mandate.

11) Time, Place, and Manner in which Interested Persons May Comment on this Rulemaking: Interested persons may present their comments concerning these rules by writing within 45 days after this issue of the *Illinois Register* to:

Ms. Gail M. DeVito
Division of Legal Services
Illinois Department of Public Health
535 West Jefferson, Fifth Floor
Springfield, Illinois 62761
217/782-2043
E-mail:rules@idph.state.il.us

12) Initial Regulatory Flexibility Analysis:

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A) Type of Small Businesses, Small Municipalities and Not-for-Profit Corporations Affected: None

B) Reporting, Bookkeeping or Other Procedures Required for Compliance: None

C) Types of Professional Skills Necessary for Compliance: None

13) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the 2 most recent Regulatory Agenda because: the decision to propose this rulemaking had not been made when the Regulatory Agenda was finalized.

The full text of the Proposed Repealer begins on the next page:

DEPARTMENT OF PUBLIC HEALTH

NOTICE OF PROPOSED REPEALER

TITLE 77: PUBLIC HEALTH
CHAPTER I: DEPARTMENT OF PUBLIC HEALTH
SUBCHAPTER j: VISION AND HEARING

PART 680
HEARING TRAINING APPLICANT REQUIREMENTS (Repealed)

Section
680.10 Eligibility
680.20 Cost
680.30 Lecture Session Curriculum

AUTHORITY: Implementing and authorized by the Child Vision and Hearing Test Act [410 ILCS 205].

SOURCE: Filed December 30, 1977; codified at 8 Ill. Reg. 4511; repealed at 22 Ill. Reg. _____, effective _____.

Section 680.10 Eligibility

Any person with a high school education or its equivalent who is working in or supervising or has a definite commitment to work in or supervise a hearing testing program may apply for training. The testing program must be an identification audiometry program consisting of individual pure-tone hearing tests. The program will not suffice as a training course for industrial testing.

Section 680.20 Cost

a) There will be no fees for attendance at a training course.
b) The Illinois Department of Public Health will not provide reimbursement for lunches or travel expenses incurred while attending the training class.
c) Persons living 50 miles or more from the training site or who require more than one hour travel time each way are eligible for overnight accommodations, if desired. Those persons who elect to stay overnight will be reimbursed for one half of the rate of a double room at the motel selected by the Illinois Department of Public Health, plus a food allowance of $7.75 per day for breakfast and dinner. (Reimbursement is contingent upon the program budget for the relevant fiscal year.) A receipt for the motel must be submitted.
d) Reimbursement will be by stipend, which will be processed through this Department in the routine manner. A delay of four to six weeks should be expected before receipt of the reimbursement check.

Section 680.30 Lecture Session Curriculum

a) Five days of lecture will be provided (Monday through Friday); a

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two-day practicum will be conducted approximately two weeks following the lecture session. The following is an outline of the lecture session curriculum:

1) Hearing impairment and the philosophy of hearing conservation;
2) Basic anatomy and physiology of the hearing mechanism;
3) Disorders of hearing;
4) The hearing threshold and the audiogram;
5) Introduction to hearing testing and test equipment;
6) Medical and educational management of persons with hearing impairment;
7) Public relations;
8) Organizing and conducting a hearing conservation program;
9) Calibration and maintenance of equipment;
10) Special testing techniques for pre-school and difficult-to-test children;
11) Supervised labs on hearing testing;
12) Field practice.

b) The course will be taught by the staff of the Hearing Conservation Program of the Illinois Department of Public Health.

c) A follow-up workshop has been scheduled a few weeks following the training course. This one-day session will be designed to:
1) Evaluate the effectiveness of the training;
2) Assist the trainees in solving individual program problems; and
3) Provide additional information to the trainees.

d) A certification will be presented following successful completion of the course. This certificate is valid for a three-year period, and can be renewed each three years by attending a short refresher workshop.

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NOTICE OF PROPOSED AMENDMENTS

1) Heading of the Part: Vision Screening

2) Code Citation: 77 Ill. Adm. Code 685

3)

Section Numbers:	Proposed Action:
685.10	Amendment
685.20	Amendment
685.110	Amendment
685.115	New Section
685.120	Amendment
685.130	New Section
685.140	New Section
685.150	New Section
685.200	Repealer
685.210	Repealer
685.220	Repealer
685.230	New Section
685.240	New Section
685.250	New Section
685.260	New Section
685.270	New Section
685.280	New Section
685.300	Repealer
685.310	Repealer
685.320	New Section
685.400	Repealer

4) Statutory Authority: Authorized by and implementing Section 4 of the Child Vision and Hearing Test Act [410 ILCS 205/4].

5) A Complete Description of the Subjects and Issues Involved: This rulemaking updates the Department's requirements for vision screening services for preschool and school age children. The amendments specify training and certification standards for technicians providing vision screening services and set fees for training courses, certification, and issuance of replacement certificates.

6) Will this Rulemaking Replace an Emergency Rule Currently in Effect? No

7) Does this Rulemaking Contain an Automatic Repeal Date? No

8) Does this Rulemaking Contain Any Incorporations By Reference? No

9) Are there any other Proposed Amendments Pending on this Part? No

10) Statement of Statewide Policy Objectives: This rulemaking does not create or expand a State Mandate.

DEPARTMENT OF PUBLIC HEALTH

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11) Time, Place, and Manner in which Interested Persons May Comment on this Rulemaking: Interested persons may present their comments concerning these rules by writing within 45 days after this issue of the *Illinois Register* to:

Ms. Gail M. DeVito
Division of Legal Services
Illinois Department of Public Health
535 West Jefferson, Fifth Floor
Springfield, Illinois 62761
217/782-2043
(E-mail: rules@idph.state.il.us)

12) Initial Regulatory Flexibility Analysis:

A) Type of Small Businesses, Small Municipalities and Not-for-Profit Corporations Affected: None

B) Reporting, Bookkeeping or Other Procedures Required for Compliance: None

C) Types of Professional Skills Necessary for Compliance: None

13) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the 2 most recent Regulatory Agendas because: the decision to propose this rulemaking had not been made when the Regulatory Agenda was finalized.

The full text of the Proposed Amendments begins on the next page:

DEPARTMENT OF PUBLIC HEALTH

NOTICE OF PROPOSED AMENDMENTS

TITLE 77: PUBLIC HEALTH
CHAPTER I: DEPARTMENT OF PUBLIC HEALTH
SUBCHAPTER j: VISION AND HEARING

PART 685
VISION SCREENING

SUBPART A: ~~AUTHORITY,~~ APPLICABILITY~~,~~ AND GENERAL PROVISIONS
~~DEFINITIONS~~

Section
685.10 Applicability
685.20 Definitions

SUBPART B: STANDARDS~~,~~ AND PROCEDURES~~,-TECHNIQUES-AND~~
~~CRITERIA~~ FOR VISION SCREENING

Section
685.100 Instrumentation
685.110 Frequency of Screening
685.115 Pass/Fail and Referral Criteria
685.120 Referral
685.130 Screening Battery for School Age Children
685.140 Screening Battery for Preschool Children and Difficult to Test Children
685.150 Screening Battery for Children Wearing Glasses or Contact Lenses

SUBPART C: STANDARDS FOR PERSONNEL PROVIDING VISION SCREENING SERVICES
~~GENERAL-STANDARDS,-CRITERIA-AND-PROCEDURES~~
~~FOR-SCHOOL-VISION-SCREENING~~

Section
685.200 Screening Battery (Repealed)
685.210 Screening and Rescreening Procedures (Repealed)
685.220 Pass/Fail and Referral Criteria (Repealed)
685.230 Personnel
685.240 Training for Vision Screening Technicians
685.250 Application for Training and Certification
685.260 Certification of Vision Screening Technicians
685.270 Recertification of Vision Screening Technicians
685.280 Lapsed Certificate

SUBPART D: FEE STRUCTURE ~~GENERAL-STANDARDS,-CRITERIA,-AND-PROCEDURES~~
~~FOR-PRESCHOOL-VISION-SCREENING~~

Section
685.300 Screening and Rescreening Procedures (Repealed)
685.310 Pass/Fail and Referral Criteria (Repealed)

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NOTICE OF PROPOSED AMENDMENTS

685.320 Fees

SUBPART E: GENERAL STANDARDS FOR TRAINING AND QUALIFICATIONS FOR PERSONNEL TO PROVIDE VISION SCREENING SERVICES

Section
685.400 Screening Personnel (Repealed)

AUTHORITY: Implementing Sections 3, 4, and 5 and authorized by Section 4 of the Child Vision and Hearing Test Act [410 ILCS 205/3, 4, and 5].

SOURCE: Adopted and codified at 6 Ill. Reg. 11053, effective August 30, 1982; amended at 22 Ill. Reg. _____, effective _____.

SUBPART A: ~~AUTHORITY, APPLICABILITY,~~ AND GENERAL PROVISIONS ~~DEFINITIONS~~

Section 685.10 Applicability

The Child Vision and Hearing Test Act authorizes the Department to administer a program of vision screening services for Illinois children. These rules apply to vision screening services required under the Act.

~~a) The Child Vision and Hearing Test Act requires vision screening services be administered to all children. These rules apply to vision screening services required under that Act.~~

~~b) The Department shall delegate responsibility to other State agencies, local health departments, school districts, or other community agencies, to develop and maintain periodic vision and hearing screening services. The Department shall make such delegations in conformance with existing services and with the approval of the entity receiving the delegation.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 685.20 Definitions

As used in this Part ~~these rules~~, the terms defined in this Section ~~section~~ shall have the meanings ascribed to ~~in~~ them herein.

"Act" means the Child Vision and Hearing Test Act [410 ILCS 205].

"Department" means the Illinois Department of Public Health.

"Eye doctor" means a physician licensed to practice medicine in all its branches and specializing in diseases of the eye or a licensed optometrist.

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NOTICE OF PROPOSED AMENDMENTS

"Vision Screening Services" means ongoing community education programs covering the following topics: identification, prevention, causes, nature and effects of vision impairments. Such programs utilize program planning, management, evaluation and reporting, procedures for detecting possible abnormalities of the visual system, referral, and follow-up.

~~"Vision Screening" means a procedure for detecting possible abnormality of the visual system with referral for correction, treatment, or appropriate school placement.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

SUBPART B: STANDARDS, AND PROCEDURES, ~~TECHNIQUES AND CRITERIA~~ FOR VISION SCREENING

Section 685.110 Frequency of Screening

a) Vision screening services ~~under these rules~~ shall be provided annually for:
   1) All preschool children 3 years of age (or older) in any public or private educational program or licensed child-care facility.
   2) All school age children who are in kindergarten and first grade; in fourth or fifth grade; in all special education classes; referred by teachers; and transfer students. Such screening services shall be provided in all public, independent, private and parochial schools. ~~All children in grades kindergarten or first, 5th and 9th grades of public, independent, private and parochial schools.~~
   ~~3) Teacher referrals and students transferring into schools who have not been previously screened.~~
   ~~4) All special education children in public, independent, private, and parochial schools using standard screening methods as set forth in these rules.~~

b) In lieu of the screening services required in subsection (a) ~~paragraph (a) above~~, of this Section, a completed and signed report form, indicating that an ~~a professional~~ eye examination by an M.D. specializing in diseases of the eye or a licensed optometrist has been administered within the previous 12 months ~~not over 12 months previously~~, is acceptable.

c) The parent or legal guardian of a student may object to vision screening tests for their child ~~children~~ on religious grounds. If a religious objection is made, a written and signed statement from the parent or legal guardian detailing such objections must be presented to the screening entity ~~local school authority. General philosophical or moral reluctance to allow vision screening will not provide a sufficient basis for an exception to statutory requirements.~~

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Section 685.115 Pass/Fail and Referral Criteria

Pass/fail criteria shall refer to the initial screening test. Referral criteria shall refer to the rescreening test. Pass/fail and referral criteria are identical standards as presented below:

a) School age children:
  1) Massachusetts Battery of tests:
    A) Phoria near and far:
      i) For children in first grade, target alignment outside a defined area for both near and far modes constitutes a failure.
      ii) For children in second grade and above, target alignment outside a defined area for either near or far modes constitutes a failure.
    B) Visual acuity. The correct identification of three or fewer of the monocular symbols constitutes a failure.
    C) Hyperopia. The correct identification of four or more of the monocular symbols constitutes a failure.
  2) Color discrimination. The correct identification of five or fewer of the eight targets constitutes a failure.
  3) BRL (both right and left). The correct identification of three or fewer of the five letters in each of the three columns constitutes a failure.
b) Preschool and Kindergarten grade children:
  1) Michigan Preschool Test. The correct identification of three or fewer of the monocular symbols constitutes a failure.
  2) HOTV (stereoscopic or distance screening). The correct identification of three or fewer of the monocular symbols constitutes a failure.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 685.120 Referral

a) A vision diagnostic examination must be immediately recommended in written form to parents or guardians of all children who meet referral criteria as a result of vision screening, including observation, instrument screening, or monitoring.
b) The screening entity or its designee shall initiate recommendations for a diagnostic examination and shall coordinate those activities necessary to complete the diagnostic examination and treatment management of the child suspect of a vision impairment.
~~a) Based on the criteria set forth in Sections 605.220 and Section 605.310, any observed anomaly or possible problem identified through instrument screening shall be reported in writing to the child's parent or legal guardian.~~
~~b) The parents or legal guardians shall be recommended through written~~

DEPARTMENT OF PUBLIC HEALTH

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~~notification to obtain a vision diagnostic examination for their child if a professional eye examination has not been secured within the previous 12 months.~~
~~c) The vision diagnostic examination shall be made by an eye doctor of the parents or guardian's choice.~~
~~d) The screening agency or its designee shall be responsible to initiate follow-up services.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 685.130 Screening Battery for School Age Children

The screening battery for school age children, grades 1 - 12, shall consist of:

a) Observation of the child (appearance, behavior, complaint).
b) Stereoscopic instrument screening using the Massachusetts Battery of tests presented in the following order:
  1) A test for muscle balance (phoria) at near and far points, in the binocular mode;
  2) A test for visual acuity at far point, in the monocular mode; and
  3) A test for excessive farsightedness (hyperopia) at far point, in the monocular mode.
c) The Pediatric Color Discrimination Test may also be presented, at far point in the binocular mode, and prior to the hyperopia test; this test should be conducted at first grade.
d) The BRL (Both Right and Left) Test, at near and far points in the binocular mode, may be conducted in lieu of the Massachusetts Battery, for junior and senior high school students.
e) School age children shall be screened with 20/30 targets.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 685.140 Screening Battery for Preschool Children and Difficult to Test Children

The screening battery for preschool children, three years and older, and Kindergarten grade children shall consist of:

a) Observation of the child (appearance, behavior, complaint).
b) Instrument screening using any one of the following tests:
  1) Stereoscopic instrument screening using the Michigan Preschool Test at far point.
  2) Stereoscopic instrument screening using the HOTV test at far point.
  3) Distance instrument screening using the Good-Lite Insta-Line HOTV test.
c) The preschool screening battery and procedures may be utilized when screening difficult to test children, including children who are

developmentally disabled, etc.

d) Preschool and Kindergarten grade children shall be screened with 20/40 targets.

e) Photoscreening, using the MTI camera, may be conducted for children under three years of age and for older children who can not be screened with stereoscopic or distance tests.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 685.150 Screening Battery for Children Wearing Glasses or Contact Lenses

a) The screening battery for children wearing glasses shall consist of:
   1) Observation (appearance, behavior, and complaint);
   2) Inspection of the lenses and frames for problems; and
   3) Determination of the child's last visit to an eye doctor.

b) The screening battery for children wearing contact lenses shall consist of (a)(1) and (3) of this Section.

c) Instrument screening of children wearing glasses or contact lenses is not appropriate.

(Source: Added at 22 Ill. Reg. _____, effective _____)

SUBPART C: STANDARDS FOR PERSONNEL PROVIDING VISION SCREENING SERVICES

~~GENERAL STANDARDS, CRITERIA AND PROCEDURES FOR SCHOOL VISION SCREENING~~

Section 685.200 Screening Battery (Repealed)

~~The appropriate battery of tests and order of presentation shall consist of:~~

~~a) Observation of the child.~~

~~b) A series of tests which are conducted in a prescribed order as follows:~~

~~1) A test for Phoria at the Near and Far points;~~

~~2) A test for Visual Acuity;~~

~~3) A test for Excessive Farsightedness (Hyperopia); and~~

~~4) Optional Tests.~~

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

Section 685.210 Screening and Rescreening Procedures (Repealed)

~~a) Observation of the child is to determine the appearance of the eyes, behavior of the child for signs of unusual visual symptoms, and/or complaints by the child regarding vision difficulties.~~

~~b) Management on Screening Day of Children Wearing Glasses or Under Care: The Illinois Department of Public Health recommends children wearing glasses should not be screened.~~

~~c) Screening Tests:~~

~~1) Phoria Near~~
~~The test is conducted in a binocular mode with the instrument set for the Near presentation of the target.~~

~~2) Phoria Far~~
~~The test is conducted in a binocular mode with the instrument set for the Far presentation of the target.~~

~~3) Visual Acuity~~
~~The test is conducted in a monocular mode, always beginning with the right eye. The instrument is set for the presentation of the target at the Far position.~~

~~4) Hyperopia~~
~~The instrument is set for a Far presentation of the target and the Plus lens in place. The test is conducted in a monocular mode, always beginning with the right eye.~~

~~d) Rescreening procedures are identical to the initial screening and conducted following a 10 14 day delay.~~

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

Section 685.220 Pass/Fail and Referral Criteria (Repealed)

~~a) School children shall be screened at the 20/30 line.~~

~~b) Pass/Fail criteria shall refer to the initial screening test. Referral criteria shall refer to the rescreening test. The Pass/Fail and Referral Criteria are identical standards presented in Paragraphs c) through e) below, of this section.~~

~~c) Phoria Near and Far~~

~~1) For children in first grade, target alignment outside a defined area for both Near and Far modes shall constitute a failure.~~

~~2) For children in second grade and above, target alignment outside a defined area for either Near or Far Modes shall constitute a failure.~~

~~d) Visual Acuity~~
~~The correct identification of 3 or less of the monocular symbols constitutes a failure.~~

~~e) Hyperopia~~
~~The correct identification of four or more of the monocular symbols constitutes a failure.~~

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

Section 685.230 Personnel

DEPARTMENT OF PUBLIC HEALTH

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Vision screening services shall be provided by a vision technician certified by the Department. Any person with a high school education or its equivalent who is working in or supervising, or has a definite commitment to work in or supervise, a vision screening program may apply for training. The screening program must be for the identification of vision problems in preschool and school age children.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 685.240 Training for Vision Screening Technicians

a) The Department shall provide or authorize a training course to prepare persons to qualify for a vision screening services certificate.

b) The vision training course shall include, but shall not be limited to, the following topics: vision conservation for children, anatomy and the vision process, diseases and disorders of the eye, vision screening, the difficult to test child, referral and follow-up procedures, and establishing, managing and evaluating a vision conservation program. The training course shall also include laboratory practice, practicum experience, and a written examination.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 685.250 Application for Training and Certification

Applicants for training and certification shall complete and submit, to the Department, the Application for Training and Certification Form.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 685.260 Certification of Vision Screening Technicians

a) The Department shall issue a certificate after the training participant:
   1) Submits the training and certification fees as required in Section 685.320;
   2) Fully attends all portions of the training course;
   3) Obtains a score of 80 percent or better on the written examination; and
   4) Demonstrates proficiency during a vision training practicum.

b) Practicum participants will be rated on the following items: School Age Tests, Preschool Tests, General Skills and Overall Skills. All above items must be rated acceptable to qualify for certification.

(Source: Added at 22 Ill. Reg. _____, effective

DEPARTMENT OF PUBLIC HEALTH

NOTICE OF PROPOSED AMENDMENTS

_____)

Section 685.270 Recertification of Vision Screening Technicians

a) The vision screening technician certificate shall be valid for three years.

b) The Department shall send expiration and renewal notices to certified persons no later than 60 days before the expiration date of the certificate. Such notices shall be sent to the last known address of the person to whom the certificate was issued.

c) The following items shall be submitted to the Department for certification renewal and shall be post-marked no later than 30 days prior to the expiration date of the certificate:
   1) a completed Certificate Renewal Form;
   2) the renewal fee, as required in Section 685.320; and
   3) Documentation of satisfactory completion of a recertification workshop provided or authorized by the Department, or a study project provided by the Department.

d) The Department shall issue a renewed certificate upon receipt of items specified in subsections (c)(1), (2), and (3) of this Section.

e) Failure to receive a notice to renew shall not relieve the certified vision screening technician of the obligation to submit the renewal form, pay the renewal fee 30 days prior to the expiration date of the certificate, and successfully complete a recertification workshop or study project.

(Source: Added at 22 Ill. Reg. _____, effective _____)

Section 685.280 Lapsed Certificate

a) Any certificate not renewed prior to its expiration date shall be deemed lapsed and shall be null and void.

b) Any certificate lapsed for a period of less than 2 years may be renewed by completing the recertification requirement and paying the fees as required in Section 685.320.

c) Any certificate lapsed for a period of two years or more may be renewed by meeting the application, training and certification requirements of this Part.

SUBPART D: FEE STRUCTURE ~~GENERAL STANDARDS, CRITERIA, AND PROCEDURES FOR PRESCHOOL VISION SCREENING~~

Section 685.300 Screening and Rescreening Procedures (Repealed)

~~a) Observation of the child shall be conducted in accordance with Section 685.210(a).~~

~~b) The instrument screening of the child is visual acuity in a monocular~~

mode at the Far position only. Always begin with the right eye.
c) Preschool rescreening procedures are identical to the initial screening and should be conducted following a 10-14 day delay.
d) Preschool screening procedures shall be applicable to testing the difficult-to-test child including the mentally handicapped, learning disabled, foreign-speaking, hearing handicapped, etc. In the event the child's condition is such that recommended screening procedures are not applicable, the child should receive alternative services if the child is considered at risk for visual difficulties.

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

Section 685.310 Pass/Fail and Referral Criteria (Repealed)

a) Preschool children shall be screened at the 20/40 line.
b) Visual Acuity: The correct identification of 3 or less of the moncular symbols constitutes a failure.

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

Section 685.320 Fees

The Department shall implement the following fee structure:

a) Applicants shall be required to pay to the Department, or its designee, a fee for attending a training course. Failure to appear for training on the scheduled date, at the time and place specified, after the applicant's application and fee for training has been received and acknowledged by the Department or the authorized training entity, shall result in forfeiture of the fee.
b) The certification fee is $30 every three years.
c) The fee for the issuance of a replacement certificate or a certificate with a change of name or address, other than at renewal time, is $10. No fee is required for name or address change on Department records when no duplicate or replacement certificate is issued.

(Source: Added at 22 Ill. Reg. _____, effective _____)

SUBPART E: GENERAL STANDARDS FOR TRAINING AND QUALIFICATIONS FOR PERSONNEL TO PROVIDE VISION SCREENING SERVICES

Section 685.400 Screening Personnel (Repealed)

Vision screening shall be provided by a technician trained and certified by the Department. A certificate will be presented following successful completion of the course. This certificate is valid for a three year period, and can be

renewed each three years by attending a recertification workshop. A valid certificate in vision as defined by the Department is contingent on the following:

a) Any person with a high school education or its equivalent who is working in or supervising or has a definite commitment to work in or supervise a vision screening program may apply for training. The screening program must be for identification of vision problems in preschool and school age children.
b) Full attendance at the vision training course is mandatory.
c) Successful completion of a written examination at the conclusion of the lecture series. A score of 75 percent or greater must be obtained, or the trainee will be failed.
d) Demonstration of proficiency at a vision practicum. This phase includes: the ability to instruct and test children, the ability to recognize screening failures and referrals, and the ability to successfully organize and maintain the vision screening program. Failure to successfully demonstrate proficiency at the practicum portion of the workshop will result in the trainee being categorized into one of the following groups:
   1) "pass with further supervision" this category will allow the trainee to pass the course after demonstration of proficiency through an additional supervisory visit(s) by the regional vision consultant of the Department;
   2) "failure to demonstrate proficiency" the category indicates the trainee did not meet expectations and will not be certified to perform vision testing.
e) Curriculum
   These training courses are offered as a program involving intensive instruction and practice time. The curriculum shall include but is not limited to the following:
   1) Vision program philosophy.
   2) Organizing and conducting a vision screening program.
   3) Approved methods of screening.
   4) Standards for screening and referral.
   5) Vision screening referral.

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

SECRETARY OF STATE

NOTICE OF PROPOSED RULE

1) Heading of the Part: Electronic Filing of Documents

2) Code Citation: 2 Ill. Adm. Code 565

3) Section Number: Proposed Action:

565.10	New Section
565.20	New Section
565.30	New Section
565.40	New Section
565.50	New Section
656.55	New Section
565.60	New Section

4) Statutory Authority: Implementing and authorized by Section 15 of the Secretary of State Act [15 ILCS 305/15] (see P.A. 89-670).

5) A Complete Description of the Subjects and Issues Involved: In conjunction with P.A. 89-670, these rules clarify procedures for electronic or facsimile filings with full legal effect. Specifically, the rules clarify how to determine which forms may be filed electronically or by fax, duties of filers, payment of fees, and retention of records.

6) Will this proposed rule replace an emergency rule currently in effect? No

7) Does this rulemaking contain an automatic repeal date? No

8) Do these proposed amendments contain incorporation by reference? No

9) Are there any other amendments pending on this Part? No

10) Statement of Statewide Policy Objectives: This rulemaking does not affect units of local government.

11) Time, Place and Manner in which interested persons may comment on this proposed rulemaking. Written comments may be submitted within 45 days to:

Carol Sudman
Assistant Counsel
Room 298, Howlett Building
Springfield, IL 62756
217/782-4783

12) Initial Regulatory Flexibility Analysis:

A) Types of small businesses, small municipalities and not for profit corporations affected: This rule is an optional new service, and will not adversely affect any business, not for profit entity, or unit of government.

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B) Reporting, bookkeeping or other procedures required for compliance: No additional reporting requirements are imposed.

C) Types of professional skills necessary for compliance: No professional skills are relevant to this rulemaking.

13) Regulatory Agenda on which this rulemaking was summarized: This rule was not included on either of the two most recent regulatory agendas because: Had not decided at that time if clarification rules would be necessary.

The full text of the Proposed Rules begins on the next page.

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NOTICE OF PROPOSED RULE

TITLE 2: GOVERNMENTAL ORGANIZATION
SUBTITLE C: CONSTITUTIONAL OFFICERS
CHAPTER III: SECRETARY OF STATE

PART 565
ELECTRONIC FILING OF DOCUMENTS

Section

AUTHORITY: Implementing and authorized by Section 15 of the Secretary of State Act [15 ILCS 305].

SOURCE: Adopted at 22 Ill. Reg. _____, effective _____.

Section 565.10 Definitions

"Electronic document" means data transmitted to the Secretary of State through an electronic medium including, but not limited to, disks, tapes, and the internet.

"Facsimile document" means a paper document transmitted to the Secretary of State via facsimile, *the signature on which is prima facie evidence for all purposes that the document was signed by the person whose signature appears on the facsimile.* [15 ILCS 305/15]

"Internet" means a nonproprietary, public computer network.

Section 565.20 Accepted Electronic and Facsimile Documents

Each department within the Office of the Secretary of State has the authority to determine which of its documents may be filed electronically (and the appropriate electronic medium) or by facsimile.

Section 565.30 Where to Send Electronic or Facsimile Filings

Electronic and facsimile documents shall be transmitted to the appropriate department within the Office of the Secretary of State.

Section 65.40 Duties of Electronic and Facsimile Filers

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Electronic and facsimile filers shall ensure that documents are filed in sufficient time to meet statutory deadlines. The receipt date of the electronic or facsimile transmission will constitute the receipt date of the document if it is acknowledged as accepted by the Secretary of State.

Section 565.50 Payment of Fees

The filer is responsible for the payment of any fees to the Secretary of State in relation to the electronic or facsimile document. A document required to be accompanied by a fee may not be deemed accepted or filed until payment is received.

Section 565.55 Acceptable Electronic Payment

The following electronic payment methods may be used for electronic or facsimile documents requiring the attachment of fees:

a) Automated Clearing House;
b) Payment Cards; or
c) Money Wire.

Section 565.60 Retention of Records

Persons who file documents with the Secretary of State via facsimile or electronically shall maintain paper or electronic records for the time periods required by the statute under which the document is filed.

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NOTICE OF PROPOSED AMENDMENTS

1) Heading of the Part: Minimum Safety Standards for Construction of Type I School Buses

2) Code Citation: 92 Ill. Adm. Code 440

3)

Section Numbers:	Proposed Action:
440.20	Amend
440.140	Amend
440.210	Amend
440.220	Amend
440.305	Amend
440.405	Amend
440.410	Amend
440.420	Amend
440.505	Amend
440.510	Amend
440.ILLUSTRATION A	Repeal
440.ILLUSTRATION B	Amend
440.APPENDIX A	Repeal
440.APPENDIX B	Repeal
440.APPENDIX C	Repeal

4) Statutory Authority: Implementing Article VIII of Chapter 12 and authorized by Section 12-812 of the Illinois Vehicle Code [625 ILCS 5/Ch. 12, Art. VIII] (see P.A. 90-108, effective July 14, 1997).

5) A complete description of the subjects and issues involved: By this Notice of Proposed Amendments, the Department is updating, clarifying and correcting the minimum safety standards for the construction of school buses manufactured for use in Illinois. The following paragraphs detail specific changes made to Sections in this Part.

Section 440.20 Guidelines: Removing unnecessary language; adding a statutory citation.

Section 440.140 Effective Date: Removing obsolete language.

Section 440.210 Federal Definitions: Clarifying language and removing a reference to Appendix A which will be repealed.

Section 440.220 State Definitions: Clarifying language; updating references to and definitions from the Illinois Vehicle Code; updating statutory citations; correcting the definition of "empty weight" for consistency with 92 Ill. Adm. Code 442; removing the definition of "newton"; and revising the definition of "school bus".

Section 440.305 Certification by Manufacturer: Updating the statutory reference and clarifying requirements.

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Section 440.405 Conformance to the Requirements: Updating the statutory reference.

Section 440.410 Incorporation by Reference of Federal Motor Vehicle Safety Standards: Updating the date of incorporation by reference of 49 CFR 571, as of October 1, 1997 and correcting the reference to the standards found in 49 CFR 571.

Section 440.420 State Requirements: Deleting criteria in the introductory paragraph that refers to the bus not being rejected at an Official Testing Station for not complying with a number of standards. This is not a true statement. 92 Ill. Adm. Code 441(Inspection Requirements for Type I School Buses) does not provide the same exception. A school bus must meet all of the requirements of 92 Ill. Adm. Code 441 before a Certificate of Safety is affixed to the bus.

Aisle: Deleting the reference to non-handicapped students; deleting the reference to federal final rules now contained in the CFR.

Capacity, Passenger: Updating the statutory citation; clarifying that passenger space is for persons who are orthopedically-challenged.

Color and Paint, Exterior: Updating statutory language governing color; providing specific standards for white roofs; adding requirements for retroreflective tape required by 49 CFR 571.217.

Crossing Control Arm: Adding new provisions to establish specification standards for crossing control arms as required by Public Act 90-108, effective July 14, 1997.

Defrosters: Adding a reference to 49 CFR 571.103.

Emergency Exits: Adding a reference to 49 CFR 571.217; clarifying requirements unique to Illinois regarding alarms and the engine starting system for consistency with 92 Ill. Adm. Code 441.

Fire Extinguisher: Adding approval of halon fire extinguishers.

First Aid Kit: Adding requirements for the construction of the box which contains the kit. Language was moved to this subsection from Section 440.Appendix B which is being repealed.

Floor Covering: Removing the requirement that floor covering be "ribbed." (New designs in the floor covering provide necessary traction without ribbing.)

Fuel system: Removing the subsection that is applicable to Type II school buses (this language will be relocated to 92 Ill. Adm. Code

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442; Inspection Procedures for Type II School Buses) and adding a reference to 49 CFR 571.301 (Fuel System Integrity).

Heaters: Renaming "inside" to "interior"; defining the symbol for "degrees."

Interior: Clarifying the padding requirements for objects located within 59 inches from the floor (designated head impact zone) for consistency with 92 Ill. Adm. Code 441.

Lamps and Signals: Removing the procedural language required by the Illinois Vehicle Code (these procedures are not necessary for the construction of school buses); correcting the reference to 49 CFR 571.108; updating the statutory reference; correcting the term used for "stop signal arm" (adding the word "panel") for consistency with 92 Ill. Adm. Code 441; correcting the cross references to subsections in this Part.

Lettering: Amending, clarifying and adding language for consistency with 92 Ill. Adm. Code 441; renaming "inside" to "interior" and "outside" to "exterior"; adding a new requirement that buses manufactured after December 31, 1998 be labeled with the vehicle's length on the interior bulkhead pursuant to National Traffic Safety Board (NTSB) findings.

Mirrors: Adding a reference to 49 CFR 571.111 (federal standards now address rearview mirror requirements specific to school buses); maintaining the existing language pertaining to additional optional convex mirrors and the protection of the reflecting surface on the back of each mirror; all other existing language will be removed.

Radio Noise: Adding a new subsection requiring radio/stereo speakers to be located at least four feet behind the rearmost position of the driver's seat for buses manufactured after December 31, 1998 pursuant to NTSB findings.

Reflectors, Front: Clarifying and correcting language pursuant to the Illinois Vehicle Code and for consistency with 92 Ill. Adm. Code 441; adding requirements for side and rear reflectors; adding a requirement that any sheet type reflex reflector must meet 49 CFR 571.108 (S5.7.1.2).

Rub Rails: Correcting a cross reference to a subsection in this Part; renaming "outside" to "exterior".

Seating: Correcting the reference to 49 CFR 571.222; removing dated language; correcting the reference to persons with special needs; removing a reference to non-handicapped students; correcting and

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adding a cross reference to a subsection in this Part; correcting language regarding flip-up seats.

Seat belts, Driver's: Adding a requirement that buses manufactured after December 31, 1998 be equipped with a lap belt/shoulder harness design for the driver.

Service Entrance and Door: Requiring that the location of the interior grab handle be on the left side of the entrance way; renaming "outside" to "exterior"; establishing new criteria for glazing in the bottom panel of the service door for consistency with the 1995 National Standards for School Transportation; clarifying service door lock options.

Stop Signal Arm: Renaming "stop signal arm" to "stop signal arm panel" for consistency with 92 Ill. Adm. Code 441; removing dated language pertaining to the hexagon-shaped semaphore (the federal standard now requires an octagon shape on all school buses); adding language to allow additional stop arm panels.

Warning Devices: Clarifying requirements for consistency with 92 Ill. Adm. Code 441.

Windows or Glazed Panels, Rear: Removing the requirement that lettering on the rear of the bus be located at least 44.1 inches above the floor.

Window Openings, Side: Correcting the reference to this subsection; renaming "outside" to "exterior".

Section 440.505 Conformance to the Requirements: Correcting the reference to the Illinois Vehicle Code.

Section 440.510 Federal Requirements: Renaming the Section to "Incorporation by Reference of Federal Motor Vehicle Safety Standards"; correcting language necessary to incorporate federal regulations by reference.

Section 440.Illustration A Hexagon Shaped Stop Signal Arm: Repealing Illustration A which is no longer allowed on newly manufactured school buses.

Section 440.Illustration B Octagon Shaped Stop Signal Arm: Renaming "stop signal arm" to "stop signal arm panel" for consistency with 92 Ill. Adm. Code 441.

Section 440.Appendix A Federal Motor Vehicle Safety Standards (FMVSS) and Related Regulations: Repealing Appendix A because it is outdated and not

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necessary for compliance with State standards. Manufacturers are required by federal law to comply with any applicable federal standard.

Section 440.Appendix B First Aid Kit Requirements (Referred to in Section 440.420(k)): Repealing Appendix B which is not necessary. Necessary language will be contained in Section 440.420(l).

Section 440.Appendix C Specification Sheet Reflective Material -- Encapsulated Lens (Based on FHWA Notice N 5040.17, June 15, 1976): Repealing Appendix C because these provisions are no longer necessary. These requirements will be covered in Section 440.420(aa) which refers to the applicable federal standard.

6) Will this proposed rulemaking replace an emergency rule currently in effect? No

7) Does this rulemaking contain an automatic repeal date? No

8) Does this proposed rule contain incorporations by reference? Yes. These conform to Section 5-75 of the Illinois Administrative Procedure Act.

9) Are there any other amendments pending on this Part? No

10) Statement of Statewide Policy Objectives: This Part will affect units of local government that purchase school buses for use in Illinois.

11) Time, Place and Manner in which interested persons may comment on this proposed rulemaking: Any interested party may submit written comments or arguments concerning this proposed rule. Written submissions shall be filed with:

By U.S. Mail:

Ms. Cathy Allen
Regulations Unit
Illinois Department of Transportation
Division of Traffic Safety
P.O. Box 19212
Springfield, IL 62794-9212
(217) 785-1181

By Messenger or Inter-Agency Mail:

DOT Annex Building
3215 Executive Park Drive
Commercial Vehicle Safety; 3rd Floor
Springfield, IL

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JCAR requests, comments and concerns regarding this rulemaking should be addressed to:

Christine Caronna-Beard, Rules Manager
Illinois Department of Transportation
2300 South Dirksen Parkway, Room 300
Springfield, IL 62764
(217) 782-3215

Comments received within 45 days after the date of publication of this *Illinois Register* will be considered. Comments received after that time will be considered, time permitting.

12) Initial Regulatory Flexibility Analysis:

A) Types of small businesses affected: This Part affects small businesses that either purchase or manufacture school buses for use in Illinois.

B) Reporting, bookkeeping or other procedures required for compliance: No additional procedures are necessary for compliance.

C) Types of professional skills necessary for compliance: No additional skills are necessary for compliance with this Part.

13) Regulatory Agenda on which this rulemaking was summarized: July 1997

The full text of the Proposed Amendment(s) begins on the next page:

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NOTICE OF PROPOSED AMENDMENTS

TITLE 92: TRANSPORTATION
CHAPTER I: DEPARTMENT OF TRANSPORTATION
SUBCHAPTER e: TRAFFIC SAFETY (EXCEPT HAZARDOUS MATERIALS)

PART 440
MINIMUM SAFETY STANDARDS FOR CONSTRUCTION
OF TYPE I SCHOOL BUSES

SUBPART A: INTRODUCTION

Section
440.10 Order
440.20 Guidelines
440.30 Responsibilities

SUBPART B: GENERAL

Section
440.110 Purpose
440.120 Scope
440.130 Applicability
440.140 Effective Date
440.150 Quantified Requirements

SUBPART C: DEFINITIONS

Section
440.205 Dictionary Used
440.210 Federal Definitions
440.220 State Definitions

SUBPART D: CERTIFICATION

Section
440.305 Certification by Manufacturer
440.310 Federal Standards
440.320 State Standards

SUBPART E: BODY REQUIREMENTS

Section
440.405 Conformance to the Requirements
440.410 Incorporation by Reference of Federal Motor Vehicle Safety Standards
440.420 State Requirements

SUBPART F: CHASSIS REQUIREMENTS

Section

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AUTHORITY: Implementing Article VIII of Chapter 12 and authorized by Section 12-812 of the Illinois Vehicle Code [625 ILCS 5/Ch. 12, Art. VIII].

SOURCE: Filed June 20, 1977; amended at 6 Ill. Reg. 7147, effective June 2, 1982; codified at 8 Ill. Reg. 15502; amended at 11 Ill. Reg. 15947, effective September 21, 1987; amended at 12 Ill. Reg. 8463, effective May 3, 1988; amended at 16 Ill. Reg. 1655, effective January 14, 1992; amended at 17 Ill. Reg. 3530, effective March 2, 1993; amended at 18 Ill. Reg. 14764, effective September 20, 1994; amended at 22 Ill. Reg. _____, effective _____.

NOTE: In this Part, superscript numbers or letters are denoted by parentheses; subscript are denoted by brackets.

SUBPART A: INTRODUCTION

Section 440.20 Guidelines

~~a)~~ ~~The Division of Traffic Safety manual entitled Illinois Minimum Safety Standards for Construction of School Buses is designated as Subparts B through F.~~

~~b)~~--This Part ~~Manual~~ provides:

a) ~~1)~~ General information on the appropriate portions of the Illinois Vehicle Code [625 ILCS 5], the applicability of the standards to public and private agencies, the purpose of the standards and the scope of the standards.

b) ~~2)~~ Definitions of terms used in this Part ~~the regulations~~.

c) ~~3)~~ Requirements for manufacturer's certification related to federal and State standards.

d) ~~4)~~ Federal and State standards applicable to the bodies of school buses.

e) ~~5)~~ Federal and State standards applicable to the chassis of school buses.

(Source: Amended at 22 Ill. Reg. _____, effective

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_____)

SUBPART B: GENERAL

Section 440.140 Effective Date

~~a)~~--These standards become effective July 1, 1977, on each incomplete vehicle manufactured on or after April 1, 1977, and on each component either assembled to or altered on such incomplete vehicle so as to construct a school bus; provided, however, a new school bus constructed of an incomplete vehicle manufactured before April 1, 1977, may not be sold or used in Illinois if its final stage of manufacture is completed after October 1, 1977.

~~b) The Director of the Division of Traffic Safety will give serious consideration to a manufacturer's written request to postpone the effective date of a paragraph of these standards to a specific later date for a specific number of buses if the latest date of the final stage of manufacture is stated and the circumstances that necessitate such postponement are adequately explained in such request. A request for postponement resulting in a final stage of manufacture later than October 1, 1977, is not likely to receive favorable consideration. Buses may be construed in compliance with these standards or portions of these standards prior to the above designated effective date(s).~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

SUBPART C: DEFINITIONS

Section 440.210 Federal Definitions

Terms are used as defined in 49 CFR 567, 568, or 571. ~~In the federal rules and standards terms are used as defined (directly or by reference) in Part 567, Part 568, or Part 571 of Title 49 in the Code of Federal Regulations (49 CFR 567, 568, or 571 ---- see Appendix A).~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 440.220 State Definitions

The terms referred to in Section 440.210 are applicable to this Section unless any definitions are displaced either by a statutory definition in 625 ILCS 5/1 or by a definition found below: ~~In the State requirements and standards terms are used as defined under Section 440.210, above, except where such definition is displaced either by a statutory meaning defined in Chapter 1 and other pertinent portions of The Illinois Vehicle Code or by a meaning defined below:~~

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"ANSI" means the American National Standards Institute (1430 Broadway, New York, N.Y. 10018).

"Body" means the portion of a bus that encloses the occupant and cargo spaces and separates those spaces from the chassis frame, engine compartment, driveline, and other chassis components, except certain chassis controls used by the driver.

"Body-on-Chassis" bus means a completed vehicle consisting of a passenger seating body mounted on a truck type chassis (or other separate chassis) so that the body and chassis are separate entities, although one may reinforce or brace the other.

"The Code" - means the Illinois Vehicle Code [625 ILCS 5].

"Driver" means ~~(IVC ch. 95 1/2 par. 1-116);~~ *"Every person who drives or is in actual physical control of a vehicle"*. [625 ILCS 5/1-116]

"Empty Weight" means the "unloaded vehicle weight"; i.e., the weight of a vehicle with maximum capacity of all fluids necessary for operation of the vehicle but without cargo or occupant (49 CFR 571.3), plus ~~2000N~~ (350 ~~450~~ lbs ~~lb)~~ allowance for driver and equipment.

"FMVSS" means the Rules and Standard(s) set forth in Part 571 in Title 49 of the Code of Federal Regulations (49 CFR 571) and known as "Federal Motor Vehicle Safety Standards."

"Forward Control" means a configuration in which more than half of the engine length is rearward of the foremost point of the windshield base and the steering wheel hub is in the forward quarter of the vehicle length (49 CFR 571.3)--includes mid-engine and rear-engine ("pusher") buses.

"Gross Vehicle Weight Rating" or (GVWR) means the value specified by the manufacturer as the loaded weight of the school bus. (See 625 ILCS 5/12-800.)

"Incomplete Vehicle" means an assemblage consisting, as a minimum, of frame and chassis structure, power train, steering system, suspension system, and braking system, to the extent that those systems are to be part of the completed vehicle, that requires further manufacturing operations (other than the addition of readily attachable components such as mirrors or tire and rim assemblies or minor finishing operations, such as painting) to become a completed school bus for use in Illinois. (Based on 49 CFR 568.3).

"Integral Type" bus means a completed vehicle either without separate body and chassis or with body and chassis joined into one unit.

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~~"IVC"-means-the-State-statutes-set-forth-in-Chapter-95--1/2,--Illinois Revised-Statutes,-and-known-as-The-Illinois-Vehicle-Code.~~

"m", following a numeral, means either "meter" or "meters".

"mm", following a numeral, means either "millimeter" or "millimeters".

"Manufacturer" (unless otherwise indicated at the point of use) means the person or organization whose name follows "MANUFACTURED BY" or "MFD BY" on the label required in Section 440.310~~,-below~~.

"Multiple Glazed Unit" means two or more sheets of safety glazing material separated by air space(s) and assembled in a common mounting (ANSI Z26.1-1966).

~~"N",--following--a--numeral,--means--either-"newton"-(1-kg-x-m/sec)-or "newtons",-the--SI--(metric)--unit--of--force--and--weight--(force--of gravity).----For--these-standards-an-object's-SI-weight-(N)-equals-its mass-(kg)-multiplied-by-the-standard-acceleration--of--free--fall,--or "gravity"--(9.806--650-meters-per-second-squared,-often-rounded-to-9.8 m/sec-for-estimates).~~

~~"New-School-Bus"-or-"New-Type-I-School-Bus"-means-a-school-bus-that-is not-a-used-vehicle-(IVC-Sec.-1-216).~~

"Passenger" means every bus occupant who is not the driver.

"SAE" means the Society of Automotive Engineers (400 Commonwealth Drive, Warrendale, Pennsylvania 15096).

"School Bus" -

Type I School Bus - A School Bus with gross vehicle weight rating of more than 10,000 pounds.

Type II School Bus - A School Bus with gross vehicle weight rating of 10,000 pounds or less. [625 ILCS 5/12-800]

Every motor vehicle, except as provided below, owned or operated by or for any of the following entities for the transportation of persons regularly enrolled as students in grade 12 or below in connection with any activity of such entity:

Any public or private primary or secondary school;

Any primary or secondary school operated by a religious institution; or

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Any public, private or religious nursery school.

This definition shall not include the following:

A bus operated by a public utility, municipal corporation or common carrier authorized to conduct local or interurban transportation of passengers when such bus is not traveling a specific school bus route but is:

On a regularly scheduled route for the transportation of other fare paying passengers;

Furnishing charter service for the transportation of groups on field trips or other special trips or in connection with other special events; or

Being used for shuttle service between attendance centers or other educational facilities.

A motor vehicle of the first division.

A motor vehicle designed for the transportation of not less than 7 nor more than 16 persons that is operated by or for a public or private primary or secondary school, including any primary or secondary school operated by a religious institution, for the purpose of transporting not more than 15 students to and from interscholastic athletic or other interscholastic or school sponsored activities. [625 ILCS 5/1-182]

~~"School-Bus"-means-(IVC-Sec.-1-182):~~

~~(a) ----every-motor-vehicle,-except-as-provided-in--paragraph--(b), owned-or-operated-by-or-for-any-of-the-following-entities-for-the transportation--of-persons-in-connection-with-any-activity-of-the entity:--a-school-operated-by-a-religious-institution-or-a-public or-private-nursery,-primary-or-secondary-school----- or-parental school.~~

~~(b) This-definition-does-not-include-the-following:~~

~~(1) A-bus-operated-by-a-public-utility,-municipal-corporation-or common-carrier-authorized-to--conduct--local--or--interurban transportation-of-passengers-when-such-bus-is-on-a-regularly scheduled--route-for-the-transportation-of-other-fare-paying passengers---or---furnishing---charter---service---for---the transportation-of-groups-on-field--trips--or--other--special trips--or--in--connection-with-special-events-or-for-shuttle service-between--attendance--centers--or--other--educational facilities--and--not--over-a-regular-or-customary-school-bus route;~~

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~~(2) A motor vehicle ... designed for carrying not more than nine passengers which is not registered as a school bus under Section 3-800;~~

~~(3) A religious organization bus as defined in Sec. 1-171.01.~~

"SI" means "Systeme International d'Unites" (International System of Units); officially abbreviated SI in all languages; the "modernized metric system" defined in ANSI Z210.1-1973 and described in ANSI SR-10 (circa 1970).

The symbol ", following a numeral, means either "inch" or "inches".

~~"Type I School Bus" means a school bus with a gross vehicle weight rating of more than 10,000 pounds.~~

~~"Type II School Bus means a school bus with a gross vehicle weight rating of 10,000 pounds or less.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

SUBPART D: CERTIFICATION

Section 440.305 Certification by Manufacturer

The manufacturer shall certify the bus conforms to the applicable federal ~~and~~ State standards in effect on the first day of the month shown in the statement, "This Vehicle Conforms To All Applicable Federal Motor Vehicle Safety Standards In Effect in (month, year)" on the label required under Section 440.310. The manufacturer must also certify that the bus conforms to all applicable State standards ~~, below, or, for State standards only, on a later month~~ (see Section 440.320~~, below~~). The certification shall be present in the bus when delivered to the purchaser as well as when submitted to the first safety test conducted under provisions of Section 13-109 of the Code [625 ILCS 5/13-109] ~~13-101, IVC~~.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

SUBPART E: BODY REQUIREMENTS

Section 440.405 Conformance to the Requirements

At the time of the first safety test conducted under provisions of Section 13-109 of the Code [625 ILCS 5/13-109] ~~13-101, IVC~~, and when delivered to the purchaser, the body of each Type I School Bus shall conform to the requirements stated or referred to in this Subpart. Some chassis requirements also applicable to the body are stated or referred to herein.

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(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 440.410 Incorporation by Reference of Federal Motor Vehicle Safety Standards

Each bus body must conform to the applicable provisions of the Federal Motor Vehicle Safety Standards (FMVSS) (49 CFR 571.101 through 571.304 ~~571.100 through 571.302~~). Those applicable provisions of the FMVSS are incorporated by reference as that Subpart of the FMVSS was in effect on October 1, 1997~~1992, as amended at 57 FR 49413, November 2, 1992, as amended at 57 FR 57000, December 2, 1992, and as amended at 57 FR 57020, December 2, 1992 and as amended at 59 FR 22997, May 4, 1994~~. No later amendments to or editions of 49 CFR 571.101 through 571.304 ~~571.100 through 571.302~~ are incorporated.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 440.420 State Requirements

Except for mirrors, which may project 153 mm (6") beyond each side of the bus, a school bus shall not exceed 2.44 m (8 feet) in width, 4.12 m (13 feet 6 inches) in height, nor 12.81 m (42 feet) in length ~~(Ill. Rev. Stat. 1991, ch. 95 1/2, pars. 15-102, 15-103 and 15-107)~~ [625 ILCS 5/15-102, 15-103 and 15-107]. ~~However, a new bus will not be considered in nonconformance with these standards and will not be rejected in a "safety test" because one or more signal, clearance, parking, or driving lamps, mirror frames or supports, bumpers, rub rails, flexible portions of fender skirts or splash guards, or other safety devices extend beyond the above stated limits as necessary to perform their safety function properly, provided such extension does not present a "snagging", sharp, or abrupt surface constituting an unwarranted hazard to a pedestrian.~~ Each bus body shall be constructed so as to preclude road splash, road dust, or the bus engine's fumes or gas entering either the driver, passenger, or service entrance space through any joint, crack, hole, or opening other than an opened door or window. In addition, various portions of the bus body shall conform to the requirements set forth under the following subsections.

a) Aisle. An aisle, easily negotiated ("easily negotiated" means that an aisle meets the dimension requirements set forth in this subsection from front of bus to back of bus) and free of tripping hazards ("tripping hazards" are tears, wrinkles and other imperfections in the floor covering material, or the floor itself causing the walking surface to be uneven), shall extend from the forward edge of the service entrance stairway to the emergency door in the rear of the bus or, when such door is absent, to the forward edge of the rearmost seat. This aisle shall be no less than 305 mm (12") wide at every location between floor covering and the top of each seat cushion and, in a bus manufactured in July 1987 or later, shall be no less than 380

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mm (15") wide at and above a level 50 mm (2") below the top of any seat back ~~on a non handicapped student's seat~~. At least 1.75m (68.9") floor-to-ceiling height shall be provided above the entire required width of this aisle between the forward edge of the rearmost seat and the forward edge of the service entrance stairway. A dedicated aisle which conforms to 49 CFR 571.217 ~~(as amended at 57 FR 49413, November 2, 1992 and as amended at 57 FR 57020, December 2, 1992 and as amended at 59 FR 22997, May 4, 1994)~~ may be adjacent to any side emergency door.

b) Battery. Either one battery or two or more suitably connected batteries may be installed.

1) When rated in conformance with SAE Standard J537h the battery(s) shall provide a current flow for engine cranking no less than the engine manufacturer's recommended Cold Cranking Current (amperes for 30 seconds) at -18° C (0° F) or, at the purchaser's option, at -29° C (-20° F).

2) When rated in conformance with SAE Standard J537h the battery(s) shall provide a Reserve Capacity (duration of 25 ampere current flow) at 27° C (80° F) no less than 135 minutes.

Agency Note: If the purchaser needs to provide for extended cold weather bus operation immediately after malfunction or failure of the battery charging equipment he should specify battery reserve capacity, and temperature, commensurate with the temperature and duration of extended operation needed.

c) Battery Carrier. When the battery is mounted outside the engine compartment it shall be attached securely in a closed, weather-tight, and vented compartment that is located and arranged so as to provide for convenient routine servicing. The battery compartment door, or cover, shall be secured by an adequate manually operated latch(es) or other fastener(s). Each electrical cable connecting the battery(s) in this carrier to the body or chassis shall be one-piece between the battery terminal connector and the first body or chassis terminal connector.

d) Bumper, Rear. The rear bumper shall be of channel type cross section with the top edge at least 225 mm (8.9") above the bottom edge, shall be formed from rolled steel at least 4.55 mm (.18") thick, and shall wrap around the rear corners of the body to a point at least 300 mm (11.8") forward of the rearmost point of the body at floor line. The rear bumper shall be attached to the chassis frame with provisions for removal by means of commonly available hand tools and the prevention of hitching-to or riding thereon. The rear bumper shall be of sufficient strength to permit the bus being pushed by another vehicle without permanent distortion.

e) Capacity, Passenger. *The vehicle maximum passenger capacity recommended by the manufacturer of the bus shall be based upon a provision for 13 inches of seating space for each passenger, exclusive of the driver.* [625 ILCS 5/12-802] ~~*The rated passenger capacity of the bus shall be the same as the number of 330 mm (13") wide protected,*~~

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~~*convalescent, or handicapped passenger seating spaces either installed or provided for in the bus (Ill. Rev. Stat. 1989, ch. 95 1/2, par. 12 802).*~~ Examples: A seat 990 mm (39") in width provides 3 passenger spaces; A seat 985 mm (38.8") in width provides 2 passenger spaces; A device resembling a seat but less than 330 mm (13") in width would not provide a passenger space. Neither a space not conforming to FMVSS 222 nor the driver's space shall be counted as a passenger space. However, ~~except that~~ any ~~suitable~~ space used for transporting an orthopedically challenged ~~a convalescent or handicapped~~ passenger shall be counted as a passenger space when computing passenger capacity to be displayed on the exterior of the bus as required in subsection (t)(7).

f) Certificate and Registration Card Holder. At least 1 card holder with a transparent face no less than 150 mm by 100 mm (5.9" by 3.9") shall be securely affixed to the interior ~~inside~~ header panel out of the students' easy reach.

g) Color and Paint, Exterior. *The exterior of each school bus shall be national school bus glossy yellow except as indicated in subsections (g)(1)-(6):* ~~Except where otherwise specified, or allowed, the exterior of the bus shall be National School Bus Chrome Yellow (Federal Standard No. 595a, glossy chrome yellow enamel No. 13432).~~

1) *The rooftop may be white.* A white roof may extend only to within six inches above the drip rails on the sides of the body. The front and rear roof caps shall remain national school bus glossy yellow.

2) *Body trim, rub rails, lettering other than on a stop signal arm and bumpers shall be glossy black* (Federal Standard No. 595a, glossy black enamel No. 170381).

3) *Lettering on a stop signal arm shall be white on a red background.*

4) *The hood and upper cowl may be lusterless black* (595a, 37038) *or lusterless school bus yellow.*

5) *Grilles on the front, lamp trim and hubcaps may be a bright finish.*

6) *The name or emblem of a manufacturer may be colorless or any color.*

7) *The exterior paint of any school bus shall match the central value, hue and chroma set forth* in this Part. [625 ILCS 5/12-801]

8) Yellow retroreflective tape required by 49 CFR 517.217 can be located on the rear bumper provided the space between the top of the bumper and the bottom of the door is not adequate to accommodate the tape.

AGENCY NOTE: To be certain of glare reduction, a purchaser should specify a lusterless paint.

h) Crossing Control Arm:

1) *Required on school buses manufactured after December 31, 1997.* [625 ILCS 5/12-807.2] (added by P.A. 90-108, effective July 14, 1997)

2) Must meet or exceed SAE J1133.

3) Must be capable of full operation between, and including, the temperatures -40 degrees F and 160 degrees F.

4) The arm, when activated, must extend a minimum of five feet from the front face of the bumper.

5) The arm must be mounted on the far right side (entry side) of the front bumper.

6) Appropriate brackets shall be used to attach the arm to the front bumper for proper operation and storage.

7) All component parts must meet or exceed any applicable federal motor vehicle safety standards in effect at the time of manufacture.

8) The arm must extend at the same time the stop arm panel extends. An independent "on/off" switch is prohibited.

9) If the driver can stop the arm from extending with the use of an optional override switch, the arm sequence must automatically reset once the service door is closed.

10) Red lights and/or red reflectors are prohibited (see 625 ILCS 5/12-807.2, added by P.A. 90-108, effective July 14, 1997).

~~1) Bumpers, wheels, rub rails and body trim (if used) shall be black (Federal Standard No. 595a, glossy black enamel No. 17038).~~

~~2) Hood top may be either lusterless black (595a, 37038) or lusterless chrome yellow.~~
~~Agency Note: To be certain of glare reduction, a purchaser should specify a lusterless paint.~~

~~3) Cowl top may be same finish as hood top.~~

~~4) Hub caps (if supplied) and those grilles located forward of the engine may be a bright or light finish such as chrome, aluminum, white, etc.~~

~~h)~~ i) Defrosters. Defrosting equipment shall be installed so as to help keep the window to the left of the driver and the glass in the service door clear of fog or frost. This defrosting equipment shall conform to those FMVSS 103 (49 CFR 571.103) performance requirements that are applicable to school bus windshields.

~~i)~~ j) Emergency Exits. All emergency exits shall conform to the applicable requirements of FMVSS 217 (49 CFR 571.217) ~~The following requirements apply to emergency exit doors and emergency exit windows~~.

1) Each opening for a required emergency exit must be outlined around its exterior perimeter with, at a minimum, 1 inch (2.54 cm) wide yellow retroreflective tape. This yellow retroreflective tape must be on the exterior surface of the bus and conform to all requirements of 49 CFR 571.217.

2) Both audible and visible alarms shall alert the driver when the engine is running and any emergency exit door either:

A) Is not fully latched, or

B) Is locked and not readily operated manually.

3) An audible alarm shall alert the driver when the engine is running and any emergency exit window either:

A) Is not fully latched, or

B) Is locked and not readily operated manually.

4) The engine starting system shall not operate while any emergency exit door or window (optional or required) is locked from either inside or outside the bus. "Locked" means that the release mechanism cannot be activated and the exit cannot be opened by a person at the exit without a special device such as a key or special information such as a combination.

5) An alarm cut-off or "squelch" control is prohibited.

6) Exception: No alarm is required for roof hatches.

~~1) A black arrow, curved or straight, at least 150 mm (5.9") in length and 15 mm (.6") in width, showing the direction each outside emergency exit release mechanism is to be moved to open the emergency exit, shall be painted or permanently affixed on the outside yellow portion of the bus within 150 mm (5.9") of each release mechanism.~~

~~2) An arrow showing the direction each inside emergency exit release mechanism is to be moved to open the emergency exit shall be painted or permanently affixed inside the bus within 150 mm (5.9") of each emergency exit release mechanism. Each inside arrow shall contrast with its background and, where suitable space is limited, may be smaller than the outside arrow(s) but must be conspicuous.~~

~~3) An audible and visible alarm shall be provided which will alert the driver when the engine is running and an emergency exit is locked and cannot be opened quickly and solely by operating the inside or outside emergency exit release mechanism(s) in accordance with the arrow(s) and instruction provided adjacent to the release mechanism(s).~~

~~4) An audible and visible alarm shall be provided which will alert the driver when the engine is running and either an emergency exit window, located within 460 mm (10.1") of the seating surface of a passenger seat, or an emergency exit door is released, i.e., "unlatched".~~

~~5) An alarm disconnect, "squelch control", or other alarm defeating or attentuating device shall not be installed.~~

~~6) For buses manufactured on or after May 2, 1994, each opening for a required emergency exit must be outlined around its outside perimeter with a minimum 1 inch (2.54 cm) wide yellow retroreflective tape. This yellow retroreflective tape must be on the exterior surface of the bus and conform to all requirements of 49 CFR 571.217 (as amended at 57 FR 49413, November 2, 1992 and as amended at 57 FR 57020, December 2, 1992).~~

~~j)~~ k) Fire extinguisher.

Agency Note: At least one fire extinguisher must be carried in each school bus transporting pupils but the purchaser may elect to install

an extinguisher which conforms to the requirements below after the bus is purchased.

The fire extinguisher shall be of the dry chemical type, with pressure gauge, mounted in a quick-release bracket of automotive type located in view of and readily accessible to the driver, except when carried in the locked compartment authorized under subsection (u) ~~(t)~~ below. The fire extinguisher shall be of a type approved by the Underwriters' Laboratories, Inc., with a rating not less than 10-BC. The operating mechanism shall be sealed with a type of seal that will not interfere with the use of the fire extinguisher. Halon fire extinguishers (10 BC) are approved.

l)~~k)~~ First-Aid Kit.

AGENCY NOTE: A first aid kit must be carried in each school bus transporting pupils but the owner may elect to install a kit which conforms to this subsection after the bus is purchased.

1) The first aid kit must be readily identifiable and readily accessible to the driver. The kit must be dust tight and substantially constructed of durable material. If the kit is not carried in the locked compartment as authorized in subsection (u)(2)~~(k)(2)~~, it must be in view of the driver.

2) The first aid kit must include, but is not limited to, the following:

A) 4" bandage compress - 2 packages
B) 2" bandage compress - 2 packages
C) 1" bandage or adhesive compress - 1 package
D) 40" triangle bandage with two safety pins - 1
E) Splint, wire or wood - 1

3) A tourniquet or any type of ointment, antiseptic or other medicine cannot be included.

m~~l)~~ Floor Covering.

1) All portions of the floor that come in contact with passengers' or driver's footwear shall be covered with a waterproof material. This floor covering shall not crack when subjected to sudden temperature change and shall be bonded securely to the floor with a waterproof substance. All seams and openings shall be filled with a waterproof sealer.

2) The floor covering in the aisles and entrance area shall be of ~~ribbed,~~ non-skid, wear-resistance type material commonly used in commercial passenger transportation vehicles.

n)~~m)~~ Fuel System.

The fuel system shall conform to all applicable provisions of FMVSS 301 (49 CFR 301). ~~Neither a fuel tank nor a fuel tube, pipe, or hose, may be installed within 300 mm (11.8") of the left exterior surface of a bus with GVWR 10,000 pounds, or less, unless such tank, tube, pipe, or hose either is located wholly inboard the left of the chassis frame for equivalent structural member) or is installed in a bus conforming to S6.2, S6.3, and S6.4 in FMVSS 301-75 (49 CFR 571.301-75). A bus with GVWR 10,000 pounds, or less, constructed of an incomplete vehicle manufactured before September 1, 1977, shall be deemed not conforming to S6.2, S6.3, and S6.4 in FMVSS 301-75 unless the label required under Section 440.310, states the bus (vehicle) conforms to FMVSS in effect September 1977 (9/77) or the manufacturer furnishes a separate certification which states the bus conforms to S6.2, S6.3, and S6.4 in FMVSS 301-75. This separate certification shall be lettered and affixed in the same manner and location as the label required in Section 440.320.~~

o)~~n)~~ Glazing Materials.

1) The following applies to glazing on Type I school buses:

A) Laminated safety glass is optional on Type I school buses. All applicable provisions of FMVSS 205 (49 CFR 205) apply to the optional laminated safety glass and also to any plastic material(s) used in multiple-glazed unit, including meeting the pertinent tests indicated below, which are specified in ANSI Standard Z26.1-1966 (R 1973), Z26.1a-1969, and are grouped in Table No. 1 of that Standard. Glazing shall be identified as shown below.

Glazing installed in:	Shall meet tests grouped in Z26.1 Table No. 1 under:	Shall bear one of the following identification markings:
Windshield	Item 1, either laminated glass or multiple glazed unit;	AS 1 Glass;
Window or door forward of rear-most location of driver's seat back		AS 1 Glass, or AS 2 Glass;
All Other locations		AS 1 Glass, or AS 2 Glass, or AS 3 Glass.

B) In addition, any exposed plastic layer of a multiple glazed unit shall be identified in conformance with FMVSS 205 (49 CFR 571.205).

2) All glazing shall be installed so the identification markings are legible.

p)~~o)~~ Heaters.

1) An interior ~~inside~~ temperature of not less than 10 degrees Celsius (50 degrees ª F) shall be maintained throughout the bus while the bus is moving at 75 kilometers per hour (46.6 miles per hour) in calm air at the average minimum January temperature, as established by the Weather Bureau, U.S. Department of Commerce,

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for the area in which the bus is to be operated.

2) Each heater shall bear a nameplate which shall identify the heater manufacturer and state the heater capacity rating when tested as recommended in SAE Recommended Practice J638, or when tested in accordance with other nationally recognized standard or code. The recommended practice, standard, or code under which the heater is rated shall be identified on the nameplate. Such nameplate shall constitute certification by the heater manufacturer that the heater performance is as shown on the plate.

3) Heater hoses shall be supported so as to prevent wear due to vibration. The hoses shall not dangle or rub against the chassis or sharp edges and shall neither interfere with nor restrict the operation of any engine function (such as an emission or ignition control mechanism). Heater hoses shall be protected or baffled between the point at which they enter the passenger compartment and the point of attachment to the heater so that, in the event of hose rupture or disconnection, passengers and/or driver will not be subject to hot water burns.

~~q)~~p~~)~~ Heater Hose Connections at Engine. Each heater hose connection to the engine shall include a shutoff valve located as close to the engine as practical. Such connection and valve shall not interfere with any engine function whether closed, partially open, or fully open, with heater hoses installed properly.

~~r)~~q~~)~~ Interior.

1) Thermal and acoustic material(s) shall be installed in the ceiling and the sides of the body to reduce heat transfer and the interior noise level.

2) The passenger compartment of the bus, including the ceiling, shall be free of any visible or concealed projections likely to cause injury. Exposed lapped joints shall be connected and/or treated to reduce likelihood of injury from exposed edges. Materials or components in the passenger compartment located within 59 inches from the floor shall be free of any sharp corner or projections or shall be padded so as to make injury unlikely.

~~s)~~r~~)~~ Lamps and Signals.

~~1)~~ ~~For informational purposes, pertinent requirements established by certain statutes and rules follow:~~

~~A)~~ ~~*Whenever a school bus is operated for the purpose of transporting passengers other than persons in connection with an activity of the school or religious organization which owns the school bus or for which the school bus is operated, the ... signal arm and flashing signal system shall not be operable through normal controls.* {625 ILCS 5/12-806}~~

~~B)~~ ~~The following applies to stop arm panels on Type I school buses:~~

~~i)~~ ~~*The stop signal arm ... shall be extended after the school bus has come to a complete stop for the purpose of loading or discharging pupils and shall be closed before starting out again. The stop signal arm shall not be extended at any other time.*~~

~~ii)~~ ~~*The alternately flashing red signal lamps ... shall be actuated after the school bus has come to a complete stop for the purpose of loading or discharging pupils and shall be turned off before starting out again. The red signal lamps shall not be actuated at any other time.*~~

~~iii)~~ ~~*The alternately flashing amber signal lamps ... shall be actuated continuously during not less than the last 100 feet traveled by the bus before stopping for the purpose of loading or discharging pupils within a business or residential district and during not less than the last 200 feet traveled by the bus outside a business or residential district. The amber signal lamps shall remain actuated until the bus is stopped. The amber signal lamps shall not be actuated at any other time.* {625 ILCS 5/11-1414}~~

~~C)~~ ~~*The driver of a school bus carrying any school child is required to stop, listen, and look before crossing any railroad, except where certain traffic controls are present.* {625 ILCS 5/11-1202} However, the State's Rules and Regulations For Operating A School Bus (which are enforced in conjunction with State aid for public pupil transportation operations) require such driver to stop at railroad crossings (no exceptions), open door to the right, listen, and look in both directions before crossing.~~

~~l)~~2~~)~~ Alternately Flashing Signal Lamps. Each bus shall be equipped with an eight 8 lamp alternately flashing signal system that conforms to S4.1.4.(b) ~~S4.1.4.(b)~~ of FMVSS 108 (49 CFR 571.108) and 625 ILCS 5/12-805 ~~provides for compliance with the Illinois Statutes quoted above~~. A separate circuit breaker and a master switch shall be provided for this signal system. When in its "off" position, this master switch shall prevent operation of the eight 8 lamp system; shall prevent operation of any lamps mounted on the stop signal arm panel required under subsection (hh) ~~(ff)~~; and shall prevent operation of any electrically controlled mechanism that would cause the stop signal arm panel to extend. The controls for the eight 8 lamp flashing signals, the stop signal arm panel, and the service entrance door shall be arranged so as to provide for the following sequence of operations while the engine is running:

A) Place the alternately flashing signal system master switch in its "off" position. Close and secure the service entrance door. Actuate the alternately flashing signal system hand or foot control. The alternately flashing

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signal lamps of either yellow (amber) or red color shall not go on.

B) With the master switch "off" and the hand or foot control actuated, open the service door. The alternately flashing signals of either color shall not go on and the stop signal arm panel shall not extend.

C) Deactivate the hand or foot control. Place the alternately flashing signal system master switch in its "on" position. Close and secure the service door. Then open the service door. The alternately flashing signal lamps of either color shall not go on and the stop signal arm panel shall not extend.

D) Close and secure the service door. Actuate the alternately flashing signal system by hand or foot control. A yellow pilot lamp in the view of the driver and the yellow alternately flashing signals shall go on.

E) Desecure but do not open the service door. The yellow pilot and the yellow alternately flashing signals shall go off. A red pilot lamp in the view of the driver and the red alternately flashing signals shall go on. The stop signal arm panel shall extend.

F) Fully open the service door. The red pilot and red signals shall remain on and the stop arm shall remain extended.

G) Close but do not secure the service door. The red pilot and red signals shall remain on and the stop arm shall remain extended.

H) Open the service door. The red pilot and red signals shall remain on and the stop arm shall remain extended.

I) Close and secure the service door. The red pilot and red signals shall go off and the stop arm shall retract.

J) Open the service door. Alternately flashing signals of either color shall not go on and the stop arm shall not extend.

2)~~3~~ Rear Turn Signals. Yellow turn signal lamps shall be mounted on the rear as far apart as practical and as high as practical but below the rear window. The effective projected illuminated area of these turn signal lamps shall be no less than required for the yellow alternately flashing signal lamps required under subsection (s)(1) ~~(r)(2)~~, above; i.e., .0122 m(2)(19in(2)).

3)~~4~~ Stop Signals. Red stop lamps shall be mounted on the rear as far apart as practical but closer to the vertical centerline of the bus than the rear turn signal lamps required under subsection (s)(2) ~~(r)(3)~~, and at the same height as those turn signal lamps. The effective projected illuminated area of these stop lamps shall be no less than required for the red alternately flashing signal lamps required under subsection (s)(1) ~~(r)(2)~~; i.e., .0122 m(2) (19in(2)).

4)~~5~~ Side Turn Signals. Two yellow side turn signal lamps conforming

to SAE Recommended Practice J914a, August 1973, shall be installed on each bus of more than 32 passenger seating capacity. Except as indicated below, this Recommended Practice shall be read as setting forth mandatory requirements. The lamps shall be "armored" and mounted on the body between the rub rails required under subsection (bb) ~~(z)~~. The right lamp shall be within 1 m (39.4") of the rear of the service entrance but, on a forward control bus, not forward of the front axle. The left lamp shall be approximately the same distance from the front bumper as the right lamp.

5)~~6~~ Interior Lighting. At least the white nosings of the service entrance steps (subsection (ee) ~~(cc)~~(3)), the floor around the stepwell, the entire aisle, and each emergency door and emergency exit shall be illuminated by lamp(s) emitting a white light. At least two ~~2~~ interior illumination lamps shall be installed in a bus that provides 330 mm (13") of seating width for each of 33 or more passengers. At least the nosings of the service entrance steps and the floor around the stepwell shall be illuminated automatically by opening of the service door. No lamp shall be installed at or near the eye level of a pupil moving through the service entranceway to the aisle unless such lamp does not shine directly into the eye(s) of any such pupil.

t)~~s~~ Lettering.

1) General. Except where otherwise required or allowed, lettering on the exterior ~~outside~~ of the body shall be black against a national school bus glossy yellow ~~National School Bus Chrome Yellow~~ background. All required letters and numerals shall conform to Series "B", or heavier series, of the Standard Alphabets for Highway Signs issued by the Federal Highway Administration, Washington, D.C. 20591. Decals may be used instead of paint. Signs, numbers, or letterings, other than those either required by statutes or required or permitted by these standards shall not be affixed permanently on either the exterior ~~outside~~ of the bus or the interior ~~inside of~~ glazing so as to be visible to the outside. Interior ~~Inside~~ lettering shall contrast with its background.

2) The words "SCHOOL BUS" shall be displayed against a national school bus glossy yellow ~~National--School--Bus--Chrome--Yellow~~ background as high as practical and approximately centered on the front and rear of the bus body, in letters at least 200 mm (8") high. These words may be painted on or applied to the bus body or displayed on a sign firmly attached to or built into the body. The background of an illuminated sign shall approximate the national school bus glossy yellow ~~National--School--Bus--Chrome Yellow~~ color as closely as feasible.

3) A school bus identification number, supplied by the purchaser, shall be displayed as high as practical on the front and rear of the bus in numerals not less than 100 mm (4") high. Such number

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may be displayed on the sides of the bus as specified by the purchaser.

4) *Either the owner's name or the school district number or both must be displayed on both sides of the bus at least four inches high, approximately centered and as high as practicable below the window line.* (Section 12-802 of the Code) The lettering must be located on one line. ~~The name of the bus owner and/or the entity (such as school authority) for which the bus is operated shall be displayed on the right and left sides of the body, approximately centered and as high as practical below the window line, in letters at least 100 mm (4") high.~~

5) The body and/or chassis manufacturer's name, emblem, or other identification may be displayed, colorless or in any color, on any unglazed surface of the bus so as not to be mistaken for the name required in subsection (t)(4) above ~~Section 440.420(s)(4)~~, and so as not to interfere with any required letters or numerals.

6) The words "EMPTY WEIGHT", or the abbreviation "EMPTY WT.", or the letters "E.W.", followed by the empty weight of the bus (Section 440.220), stated in pounds, shall be displayed on the exterior ~~outside~~ of the body near the rear edge of the service entrance in numerals and letters at least 50 mm (2") high.

Examples: EMPTY WEIGHT 16,800 lb E.W. 16,800 lb

7) The word "CAPACITY", or the abbreviation "CAP.", and the rated passenger capacity (subsection (e) above) followed by the word "PASSENGERS", or the abbreviation "PASS.", shall be displayed on the exterior ~~outside~~ of the body near the rear edge of the service entranceway, and on the interior ~~inside~~ above the right portion of the windshield, in numerals and letters at least 50 mm (2") high.

8) The words "NO STANDEES" shall be displayed only on the interior ~~inside~~ above the windshield, approximately opposite the aisle but to the right of the mirror and sun visor, in letters at least 50 mm (2") high.

9) The words "EMERGENCY DOOR" or "EMERGENCY EXIT" in letters at least 5 cm high must ~~may~~ be displayed on the interior and exterior of ~~, inside or outside~~ the bus. "EMERGENCY DOOR" must be displayed at the top of, or directly above, any emergency exit door. "EMERGENCY EXIT" must be displayed at the top of, or directly above, or at the bottom of, any emergency exit window. They may be displayed~~,~~ on a separate colorless background (such as white, aluminum, or silver) that extends no more than 15 mm (.6") above or below the words and no more than 25 mm (1") to the right or left of the words. ~~The words "NO STANDEES" and/or the capacity (subsection(s)(7)) may be so displayed on the inside only.~~

10) A black arrow, curved or straight, at least 150 mm (5.9") in length and 15 mm (.6") in width, showing the direction each exterior emergency exit release mechanism is to be moved to open the emergency exit, shall be painted or permanently affixed on the exterior yellow portion of the bus within 150 mm (5.9") of each release mechanism.

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11) An arrow showing the direction each interior emergency exit release mechanism is to be moved to open the emergency exit shall be painted or permanently affixed on the interior of the bus within 150 mm (5.9") of each emergency exit release mechanism. Each interior arrow shall contrast with its background and, where suitable space is limited, may be smaller than the exterior arrow(s) but must be conspicuous.

12) Alternate Fuel

A) *If the bus uses alternate fuel (e.g., propane, CNG), the vehicle must be marked with an identifying decal. Such decal shall be diamond shaped with white or silver scotchlite letters one inch in height and a stroke of the brush at least 1/4 inch wide on a black background with a white or silver scotchlite border bearing either the words or letters:*

"PROPANE" = If propelled by liquefied petroleum gas other than liquefied natural gas; or

"CNG" = If propelled by compressed natural gas. The sign or decal shall be maintained in good legible condition.

B) *The alternate fuel decal shall be displayed near the rear bumper and visible from the rear of the vehicle.* (Section 12-704.3 of the Code)

13) For buses manufactured after December 31, 1998, the vehicle's length (rounded up to nearest whole foot) must be displayed on the interior bulkhead clearly within the driver's view. (For example: vehicle length of 39.1 feet will be displayed as 40 feet.)

14) A "Stop Line" in contrasting color is required between 5.9 and 6.1 inches below the top of each side window opening. The line shall be located between each window that slides downward.

u) ~~t~~ Locked Compartment (Optional). If specified by the purchaser, a lockable compartment may be installed for storage of fire extinguisher, first-aid kit, warning devices, wheel chocks, or other items.

1) The compartment locking device shall be connected with an automatic audible and visible alarm that will alert the driver when the engine is running and the compartment is locked. No alarm disconnect, "squelch control", or other alarm defeating mechanism shall be installed.

2) A red cross, formed of five 5 equal squares, and the words "FIRST-AID KIT" shall be displayed on the compartment door, or cover, if the first-aid kit is to be carried in the locked compartment.

3) The words "FIRE EXTINGUISHER" shall be displayed on the compartment door, or cover, if the fire extinguisher is to be carried in the locked compartment.

v) ~~u)~~ Metal Treatment.

1) Unless excluded below, all steel or iron used in construction of the bus body and attached equipment shall be either resistant to atmospheric corrosion, or zinc coated, or treated by equivalent process. Particular attention shall be given to each fastener or attaching device, lapped surface, welded connection or fastening, cut edge, punched or drilled hole, surface subjected to abrasion, closed or box section, and any unvented or undrained area or space. The number of unvented or undrained areas or spaces is to be minimized. Excluded are door handles, grab handles, and interior decorative parts.

2) As evidence that above requirements have been met, a sample of fastener, material, or section of body, coated or finished as installed in the bus, when subjected to a 1,000-hour salt spray test in accordance with Standard ANSI Z118.1-1974 "Method of Salt Spray (Fog) Testing" (ASTM B 117-73) shall not exhibit more than 10 percent reduction in weight after all adherent corrosion products are removed.

w) ~~v)~~ Mirrors. ~~Mirrors located inside or outside the bus shall be firmly supported, shall be adjustable, and shall afford the seated driver a clear, stable, reflected view.~~

1) All mirror systems shall conform to the applicable requirements of FMVSS 111 (49 CFR 571.111).

2) More convex mirrors than required above may be installed, if specified by the purchaser.

3) The reflecting surface on the back of each mirror shall be protected from abrasion, scratching, and atmospheric corrosion.

~~i) At least one interior mirror shall be installed so as to afford the seated driver a view of the bus interior as well as portions of the roadway to the rear of the bus. The mirror(s) shall be of clear glass, shall have an overall reflecting surface at least 150 mm (5.9") by 760 mm (29.9"), and shall be framed, with rounded corners and padded edges.~~

~~2) An outside convex mirror shall be installed on the right side so as to afford the seated driver a reflected view of the roadway along the right side of the bus from at least the rearmost surface of the rear bumper to at least the forwardmost surface of the right front tire. The projected reflecting area of this convex mirror shall be no less than .020 m(2) (43.4 sq. in.).~~

~~3) An outside convex mirror shall be installed on the left side so as to afford the seated driver a reflected view of the roadway along the left side of the bus from at least the rearmost surface of the rear bumper to at least the front edge of the driver's seat in its most forward position.~~

~~4) If any seated driver of a forward control bus does not have a view of the front bumper and the roadway in front of the bus, a convex mirror shall be installed so as to afford such seated driver a reflected view of the front bumper and the roadway in front of the bus.~~

~~AGENCY NOTE: FMVSS 111 requires a crossview mirror on "conventional" school buses but not on forward control buses.~~

~~5) More convex mirrors than required above may be installed, if specified by the purchaser.~~

~~6) Each convex mirror shall be mounted so as not to reduce the rectangular reflecting area of any flat outside mirror below .0323 m(2) (50 sq. in.).~~

~~7) The average radius of curvature of each convex mirror shall be as long as practical, so as to provide for the required or desired view with as little distortion as feasible.~~

~~8) The reflecting surface on the back of each mirror shall be protected from abrasion, scratching, and atmospheric corrosion.~~

x) ~~w)~~ Mounting of Body. This subsection does not apply to an integral type bus.

1) After the date of manufacture of the incomplete vehicle the chassis frame shall not be altered so as to extend the wheelbase. Other extension(s) of the chassis frame may be accomplished only by the incomplete vehicle, intermediate, or final-stage manufacturer or by an agent of such manufacturer properly instructed and authorized by such manufacturer to make such extension(s).

2) Insulating material shall be placed at all mounting points between the body and chassis frame. This material shall be at least 5 mm (.2") thick, may have the qualify of the sidewall of an automobile tire, and shall be so secured that it will not move, vibrate, or "crawl" out of place during normal operations.

3) The body front shall be attached and sealed to the chassis cowl so as to prevent the entry of water, dust, or fumes through the joint between the chassis cowl and the body.

y) Radio Noise. For buses manufactured after December 31, 1998, radio/stereo speakers must be located at least four feet behind the rearmost position of the driver's seat.

AGENCY NOTE: Two-way communication radios are allowed.

z) ~~x)~~ Rack, Book. Not permissible.

aa) ~~y)~~ Reflectors. ~~Front. Two yellow (amber) reflectors are required to be installed so as to indicate either or both of the outer edges of the bus to a driver approaching the front of the unlighted bus between sunset and sunrise. [625 ILCS 5/12-202]~~

1) Front

A) Two yellow rigid or sheet type (tape) front reflex

reflectors shall be attached securely and as far forward as practicable. (Section 12-202 of the Code) They shall be located between 15 and 60 inches above the roadway at either fender, cowl, or body and installed so as to mark the outer edge of the maximum width of the bus. No part of the required reflecting material may be obscured by a lamp, mirror, bracket, or any other portion of the bus. No part of the required reflecting material may be more than 11.8 inches (300 mm) inboard of the outer edge of the nearest rub rail. The reflector may be any shape (e.g., square, rectangle, circle, oval, etc.). A rigid type reflex reflector may be any size if permanently marked either DOT, SAE A, or SAE J 594; otherwise, it shall display at least seven square inches of reflecting material (about three inch diameter if a solid circle).

B) A sheet type (tape) reflex reflector which conforms to FMVSS 108 (49 CFR 571.108 (S5.7.1.2)) may be used but its forward projected reflecting area shall be at least eight square inches.

2) Left Side
One amber at or near the front and one red at or near the rear. Mounted at a height not less than 15 inches and not more than 60 inches above the surface of the road. On sides of buses 20 feet or more in length, one amber as near center as practicable must also be provided. (Section 12-202 of the Code) The reflector must measure a minimum of three inches in diameter.

3) Right Side
One amber at or near the front and one red at or near the rear. Mounted at a height not less than 15 inches and not more than 60 inches above the surface of the road. On sides of buses 20 feet or more in length, one amber as near center as practicable must also be provided. (Section 12-202 of the Code) The reflector must measure a minimum of three inches in diameter.

4) Rear
Two red reflectors on rear body within 12 inches of lower right and lower left corners. (Section 12-202 of the Code) The reflector must measure a minimum of three inches in diameter.

~~1) Two--yellow--front--reflectors,-either-prismatic-or-sheet-(tape),-shall-be-installed-between-300-mm-and-1525mm-(15"--&--60")--above the--roadway--on-either-the-fenders,-the-cowl,-or-the-body-as-far apart-as-practical-but-with-no-part--of--the--reflecting--surface more--than-300-mm-(11.8")-inboard-of-the-maximum-width-of-the-bus at-and-including-the-rub-rails--required--under--subsection--(z), below.~~

~~2) A--prismatic--reflex--reflector,--if--installed,--shall--meet-the performanee-requirements-of-FMVSS-108-and-be-installed--with--its front--faee--essentially--vertical--and--facing-no-more-than-11.3 degrees-outboard-of-forward.~~

~~3) Sheet-or-tape,--if--installed,--shall--be--of--reflex--reflective material--conforming-to-the-specification-in-440.Appendix-C.--The forward-projected-area-of-such-reflector-shall-be--no--less--than .005-m(2)-(8-sq.-in.).~~

bb)~~z)~~ Rub Rails.

1) Rub rails of longitudinally corrugated or ribbed steel at least 100 mm (3.9") wide shall be fixed on the exterior ~~outside~~ of the bus.

2) There shall be one rub rail located approximately at seat level which shall extend from the rear of the service entrance completely around the bus body without interruption, except at a rear emergency door or a rear compartment, to a point of curvature near the front of the body on the left side.

3) There shall be one rub rail on each side located approximately at floor line which shall extend over the same longitudinal distance as the rub rail required under subsection (bb)(2) ~~(z)(2)~~, above, except:

A) This rub rail need not extend across a wheel housing, and

B) This rub rail may terminate at the radii of the right and left rear corners of the body.

4) Each rub rail required above shall be fastened to the bus body so as to attain at least 60 percent of the tensile strength of the weakest joined material, when strained in a direction parallel to the length of the rub rail.

5) Each joint in a rub rail required above shall be constructed so as to attain at least 60 percent of the tensile strength of a jointless length of rub rail, when strained in a direction parallel to the length of the rub rail.

6) More than two ~~2~~ rub rails may be installed on a side and/or the rear of a bus.

cc)~~aa)~~ Seating. Each seat and each barrier are required to conform to FMVSS 222 (49 CFR 571.222) ~~Federal--Motor--Vehicle--Safety--Standards (FMVSS).---See-Sections-440.10-and-440.Appendix-A.~~

1) Seat, Driver's. The driver's seat shall be rigidly positioned, and shall afford both vertical and fore-and-aft adjustments of not less than 100 mm (3.9"), without the use of a tool or other non-attached device. The shortest distance between the steering wheel and the back rest of the operator's seat shall be no less than 280 mm (11").

2) Seats, Students'.

A) Each seat (except as provided in subsection (cc)(4) shall be constructed so that the shortest straight-line distance from the top of the seat back to the empty seat cushion is 28" when measured near the transverse center of the seat at the front of the seat back and along the angle of rearward inclination of the seat back. Since the height of a seat back is difficult to measure precisely on a repeated basis, a measurement of 27.5" or more is deemed acceptable.

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B) Each seat shall be forward facing (except as provided in subsection (cc)(4)).

~~A) In a bus manufactured in July 1977 or later:~~

~~i) Each non-handicapped student's seat shall be constructed so that the shortest straight line distance from top of seat back to empty seat cushion is 20" when measured near the transverse center of the seat at the front of the seat back and along the angle of rearward inclination of the seat back. Since the height of a seat back is difficult to measure precisely on a repeatable basis, a measurement of 27.5" or more is deemed acceptable.~~

~~ii) Each non-handicapped student's seat shall be forward facing.~~

C)~~B)~~ A flip-up seat may be located only immediately adjacent to any side emergency door. The flip-up seat must conform to the following:

i) The seat must be designed so that, when in the folded position, the seat cushion is flat against the seat back to prevent a child's limb from becoming lodged between the seat cushion and seat back.

ii) The seat must be designed to discourage a child from standing on the seat cushion when in the folded position.

iii) The working mechanism under the seat must be covered to eliminate any tripping hazard.

iv) All sharp metal edges on the seat must be padded to prevent any snagging hazard.

~~v) No portion of a seat frame or seat bottom may extend past door opening.~~

v)~~vi)~~ No portion of the door latch mechanism can be obstructed by a seat.

vi)~~vii)~~ There must be at least 11.7 inches (30 cm) measured from the door opening to the seat back in front.

3) Barriers, Students'. The ~~In a bus manufactured in January 1980 or later, the~~ vertical distance from the floor covering to the top of a barrier positioned in front of a student's seat (as required by 49 CFR 571.222 ~~FMVSS, (see Section 440.APPENDIX A, Standard No. 222)~~) shall measure not less than the vertical distance from the floor covering to the top of the seat back on the ~~non-handicapped student's~~ seat installed behind that barrier.

4) In the case of a seat to be occupied by a ~~handicapped~~ student with special needs, the seat back, forward facing, and barrier requirements of subsections (cc)(2) ~~(aa)(2)~~ and (3) shall be changed only as necessary to meet the needs of the ~~handicapped~~ student with special needs (e.g., seat missing to accommodate wheelchair, hard surfaced stretcher installed to accommodate child who is not capable of sitting in a upright position) (see

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92 Ill. Adm. Code 444).

dd)~~bb)~~ Seatbelt(s), Driver's.

1) Each driver's seatbelt assembly shall be arranged so that all portions of the assembly remain above the floor when not in use. Any retractor(s) installed shall be of the automatic locking type.

2) Buses manufactured after December 31, 1998 must be equipped with a lap belt/shoulder harness designed for the driver.

ee)~~cc)~~ Service Entrance and Door.

1) The service entrance shall be located on the right side near the front, in unobstructed and convenient view of the driver. The service entrance shall have a minimum vertical opening of 1.7 m (67") and a minimum horizontal opening of 610 mm (24").

2) A steel grab handle not less than 250 mm (9.8") in length shall be firmly attached in an unobstructed location on the left side of ~~inside~~ the entranceway ~~entrance way~~ as a person enters the bus.

3) The bottom step in the entranceway shall not extend beyond the exterior ~~outside~~ of the body. With all seats empty, the bottom step shall be not less than 300 mm (11.8") and not more than 400 mm (15.7") from the roadway. At least two ~~2~~ steps shall be provided. The steps shall be enclosed. Risers shall be approximately equal. Each step, including the floor at the top riser, shall be surfaced with a nonskid material with a 40 mm (1.6") to 80 mm (3.1") white nosing as an integral piece.

4) The service door shall be either manually or power operated by the seated driver. When in the closed and secured position, the door operating mechanism shall prevent accidental opening but shall afford prompt release and opening by the driver. No exposed parts of a door operating mechanism shall come together so as to shear or crush finger(s). The vertical closing edge(s) of a service door shall be padded to lessen chance of injury.

5) A power operated door shall be equipped for emergency manual operation in case of power failure. Instructions for emergency operation of a power operated door shall be affixed permanently on the interior ~~inside~~ of the door in letters at least 12 mm (.5") high.

6) A single-section service door shall be hinged at the front of the service entrance.

7) Glazed panels shall be installed in the service door to afford the driver a view of small children outside the door, traffic signs, and intersecting roadways. The bottom of each lower glass panel shall not be more than 10 inches from the top surface of the bottom step. The top of each upper glass panel shall not be more than 3 inches from the top of the door. ~~The bottom of the lowest glazed panel(s) in the door shall be no higher than 900 mm (35.4") from the roadway when all seats are empty. The top of the upper glazed panel(s) shall be no more than 150 mm (5.9")~~

~~below the top of the door.~~

8) Service Door Lock (Optional). If ordered by the purchaser, a lock may be installed on or at the service door. Any type service door locking system installed in the bus shall conform to at least one of the following requirements.

A) ~~Requirement 1:~~ A locking system shall not be capable of preventing the ~~seated bus~~ driver from easily and quickly opening the service door; ~~or~~.

B) ~~Requirement 2:~~ A locking system that is capable of preventing the ~~seated bus~~ driver from easily and quickly opening the service door shall include an audible and visible alarm to alert the driver when the engine is running and the service door is locked. No alarm disconnect, "squelch control", or other alarm defeating or attenuating device shall be installed; ~~or~~.

C) ~~Requirement 3:~~ A locking system shall not be capable of preventing the ~~seated bus~~ driver from easily and quickly opening the service door except when, and only when, a person outside the bus uses a key that is not capable of locking more than one of at least 1000 of the door manufacturer's key locking systems.

ff)~~dd)~~ Steering Wheel Clearance. The rim grip of the steering wheel shall have at least 50 mm (2") clearance in all directions, except at the spokes.

gg)~~ee)~~ ~~Steps~~, Body Front. On each side at the front of the body at least one grab handle and recessed foothold or folding stirrup step shall be installed so as to provide easy access to the windshield for cleaning purposes.

hh)~~ff)~~ Stop Signal Arm Panel.

1) A stop signal arm panel must be installed on the left side of the bus which conforms to 49 CFR 571.131. The panel and may be operated either manually or mechanically. Decals may be used in lieu of painting. Strobe lamps are acceptable on stop signal arm panels ~~arms~~.

~~A) For any school bus manufactured on and after September 1, 1992 the arm must be an octagon shaped semaphore which conforms to 49 CFR 571.131 (October 1, 1992). No later amendments to or editions of 49 CFR 571.131 are incorporated.~~

~~B) Buses manufactured prior to September 1, 1992 may either be equipped with an octagon shaped semaphore which meets the requirements listed in subsection ff(1)(A) or a hexagon shaped semaphore which meets the requirements listed in subsection ff(1)(C).~~

~~C) Hexagon The arm shall be a hexagon shaped semaphore approximately 10 inches wide and 10 inches long and of 16 gauge metal. The stop signal arm shall have the word "STOP" painted on both sides in white letters at least six inches high with a brush stroke approximately 7/8 inch wide. The word "STOP" shall be painted on a panel with red background of approximately 8 inches by 16 inches. The remaining area of the stop arm blade is to be painted white with a band of white border at least 1/2 inch wide painted front and rear on both sides as contrast. The white portion of the stop signal arm shall be reflectorized or shall have double faced lamps with red lens approximately four inches in diameter located in the top and bottommost position of the blade. These lamps shall light and flash alternately when the stop arm is extended and likewise turn off and stop flashing when the arm is closed.~~

2) "Operated ... mechanically" shall be interpreted to include power operation. Also, "16-gauge metal" shall be interpreted to include thicker metal and any nonmettalic material equivalent or superior to hot rolled 16-gauge mild steel in stiffness, corrosion resistance, and durability.

3) ~~Section 440.Illustration A depicts the hexagon shaped semaphore referenced in subsection (ff)(1)(C).~~ Section 440.Illustration B depicts the octagon shaped semaphore required in subsection (hh)(1) ~~referenced in subsection (ff)(1)(A)~~.

4) When demonstrating conformance with signal operating requirements by performing the sequence of operations specified under subsection (s)(1) ~~(r)(2)~~, the driver, or operator, may employ any independent or manual operation or disconnection of the stop signal arm panel that is provided for convenient use by the seated driver without using any type of tool and without removing any unattached part.

5) Additional stop signal arm panels may be added at the purchaser's request. Additional panels must be located on the left side of the bus. Additional panels must operate in conjunction with the required panel and meet all stop arm panel requirements except as follows. The additional panel must not contain any lights, marking or reflective material on the front side of the panel. The additional panel must be located in the rear half of the bus adjacent to the rearmost window.

ii)~~gg)~~ Storage Compartment(s) (Optional).

1) If installed, the storage compartment(s) shall be fire-resistant and of adequate strength and capacity for the storage of the items to be carried, such as tire chains, tow chains, tools for roadside or minor repairs, school activity equipment, etc. The compartment(s) shall provide reasonable security for the contents and shall be constructed and installed so as to preclude passenger injury due to the compartment(s) or the contents becoming dislodged when the bus is subjected to the maximum possible braking force and to minimize chances of such injury when the bus is subjected to a collision impact.

2) If a relatively small storage compartment is located inside the

passenger compartment, seat cushion(s) alone may not serve as the cover for the compartment.

jj)~~hh)~~ Sun Visor. An interior, adjustable, transparent, tinted sun visor not less than 150 mm (5.9") high by 760 mm (29.9") wide shall be so installed that it can be turned up and will remain up when not in use. It may be supported so that it can be moved for use on the driver's left, but when used in front of the driver and in a position approximately parallel to the windshield it shall be supported at or near each of its ends so as to minimize its vibration.

kk)~~ii)~~ Tow Hook, Rear (Optional). Any tow hook(s) installed on the rear shall be attached or braced to the chassis frame, or to an equivalent structural member of an integral type bus. A tow hook may not extend beyond the rear face of the rear bumper.

ll)~~jj)~~ Undercoating. The underside of the body, including floor members and the side panels below the floor, shall be coated with a fire-resistant undercoating material applied by the spray method so as to seal, insulate, reduce corrosion, and reduce interior noise. Non-metallic components need not be coated.

mm)~~kk)~~ Ventilation. The body shall be equipped with a controlled ventilation system of sufficient capacity to maintain a satisfactory ratio of outside to inside air under cool and cold operating conditions without opening of windows. With a powered ventilation system, air outlet openings shall be located, sized, and manufactured so that, with doors and windows closed, a positive pressure is maintained in the driver and passenger spaces, to lessen chances of dangerous gas entering such spaces. Fresh air inlet(s) shall be located so as to minimize entrance of either dangerous engine gas or obnoxious engine fumes.

nn)~~ll)~~ Warning Devices. *Either three red cloth flags not less than 12 inches square and three red reflectors a minimum of three inches in diameter or three bi-directional emergency triangles that conform to 49 CFR 571.125.* (Section 12-702 of the Code) The kit must be securely stored. ~~Emergency warning devices supplied with the bus shall consist of 3 bi-directional, fluorescent reflective, day-night, triangular warning devices that conform to FMVSS 125.~~

AGENCY NOTE: A school bus must carry warning devices when on the public roads, but the bus purchaser may elect to install warning devices after the bus is purchased ~~that are in serviceable condition and that conform to 625 ILCS 5/12-702 and to school bus safety test requirements~~.

oo)~~mm)~~ Weight Distribution and Gross Weight. Storage or cargo spaces, if installed, and seats shall be located so that when the bus is fully loaded as specified or advertised by the manufacturer the loads exerted on the roadway will exceed neither a tire load rating, nor a gross axle weight rating, nor the gross vehicle weight rating indicated by the data displayed on the label permanently affixed in compliance with Section 440.310.

pp)~~nn)~~ Wheel Housings.

1) Each wheel housing opening shall allow for unimpeded wheel and tire service or removal.

2) Each rear wheel housing shall provide the clearance recommended in SAE Information Report J683a, July 1966, for installation and use of tire chains on the dual or single tires installed on the rear wheels.

qq)~~oo)~~ Windows or Glazed Panels, Rear. Glazed panels, or windows, shall be installed in the rear of the bus so as to afford the seated driver a reflected view through the rear of the bus as wide and as high as practical without unduly weakening or increasing the cost of the body structure. Such view shall be as low as allowed by the back(s) of the rear seat(s) except that, when the aisle required under subsection (a), extends to a rear emergency door, an additional lower glazed panel shall be installed to afford the driver an additional view through such panel at least the width of the required aisle and as low and high as practical. ~~Any authorized or required sign(s), letters, or numerals displayed on the glazing in the rear of the bus shall be wholly located at least 1.12 m (44.1") above the floor, provided, however, the glazing identification markings required under subsection (n)(2), may be displayed at lower levels.~~

rr)~~pp)~~ Window Openings, Side. This subsection does ~~The following subparagraphs do~~ not apply to a window or glazed panel installed forward of a front passenger seat, and are optional for a window installed either beside a rear passenger seat, or in a side emergency exit.

1) By sliding downwards each side window not excluded above shall provide an opening (for emergency egress) at least 560 mm (22") wide (fore & aft) and at least 230 mm (9") high. However, with the window in its lowest position the opening shall be at least 460 mm (18.1") above the seating surface of any passenger seat. Any latch located in the side window opening shall be recessed. Each such opening shall be free of exterior ~~outside~~ or interior ~~inside~~ window guard(s) or bar(s). Split-sash windows may be installed. Each exposed edge of glass shall be banded.

2) A horizontal "Stop Line" shall be affixed permanently across the stationary structure between each of the windows that can be opened by sliding downwards. The bottom of the line shall be between 150 mm and 155 mm (5.9" and 6.1") below the top of the window opening. The line shall contrast with the color of the stationary structure and be at least 5 mm (.2") wide.

ss)~~qq)~~ Windshield.

1) The windshield shall be large enough to permit the operator to see the highway clearly, and shall be curved or slanted to reduce glare. The front cornerposts and other supports shall be shaped and located so as to cause as little obstruction to the driver's view of the highway as practical.

2) The windshield shall have a graduated glazing shade band across the top. The definition and boundary of this shade band shall be

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as recommended in SAE Recommended Practice J100, July 1969.

tt)~~rr)~~ Wiring. The following applies to wiring in Type I school buses:

1) All wiring for lamps and other electrical devices shall be as recommended for automobiles, motor coaches, and heavy duty starting motor circuits in SAE Recommended Practices J556, J555a, and J541a and in other practices or standards referenced therein, unless preempted by FMVSS.
2) Circuits.
   A) Wiring shall be arranged in at least nine regular circuits as follows:
      i) Head, tail, stop (brake), and instrument panel lamps;
      ii) Clearance lamps and any lamps in or adjacent to step risers;
      iii) Interior lamps;
      iv) Starter motor;
      v) Ignition, emergency exit alarm signal(s), and other alarm signal(s);
      vi) Turn signal lamps;
      vii) Alternately flashing signal lamps and stop signal arm lamps;
      viii) Horn;
      ix) Heater and defroster.
   B) Any of the above combination circuits, except (vii), may be divided into independent circuits. Whenever feasible, all other electrical functions (sanders, windshield wipers, heaters, defrosters, etc.) shall be provided with independent and properly protected circuits.
3) Each body circuit shall be coded either by numeral(s) and/or letter(s) at approximately 100 mm (3.9") intervals, or by color and numeral(s) and/or letter(s), or by color(s) only. The code(s) shall appear on a diagram of the circuits in a readily accessible location.
4) A separate fuse or circuit breaker shall be provided for at least each circuit required under subsection (tt)(2)(A) ~~(rr)(2)(A)~~, except that components of the engine starter and ignition circuits may be protected by other means.
5) Wires not enclosed within the body shall be fastened securely at intervals of not more than 460 mm (18.1").
6) All terminals and splice clips shall be accessible.
7) The chassis manufacturer shall install a readily accessible electrical terminal so that the net body and chassis electrical current flow can be indicated through a chassis ammeter without dismantling or disassembling the chassis component. The chassis wiring to this terminal shall have a current carrying capacity at least equal to the maximum generator output.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

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SUBPART F: CHASSIS REQUIREMENTS

Section 440.505 Conformance to the Requirements

At the time of the ~~original~~ safety test conducted under provision of Section 13-109 of the Code ~~13-101, of the IVC~~, and when delivered to the purchaser, the chassis of each Type I School Bus shall conform to the requirements stated or referred to in this Subpart. Some body requirements also applicable to the chassis are repeated or referred to herein.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 440.510 Incorporation by Reference of Federal Motor Vehicle Safety Standards ~~Federal Requirements~~

Each bus body must conform to the applicable provisions of the Federal Motor Vehicle Safety Standards (FMVSS) (49 CFR 571.101 through 571.304) in effect on the first day of the month in which the chassis manufacturer completed his last manufacturing operation on the incomplete bus. Those applicable provisions of the FMVSS are incorporated by reference as that Subpart of the FMVSS was in effect on October 1, 1997. No later amendments to or editions of 49 CFR 571.101 through 571.304 are incorporated. ~~Each bus chassis shall conform to the applicable provisions of Federal Motor Vehicle Safety Standards (FMVSS) 101, 102, 105-75, 106-74, 108, 112, 113, 116, 119, 120, 121, 124, and 301-75 in effect on the first day of the month in which the chassis manufacturer completed his last manufacturing operation on the incomplete bus, i.e., the month designated adjacent to the name of the original incomplete vehicle manufacturer on the certification label required under Section 440.310, above. Availability and summary descriptions of the federal certification regulations and the applicable FMVSS are in Appendix I.~~

(Source: Amended at 22 Ill. Reg. _____, effective _____)

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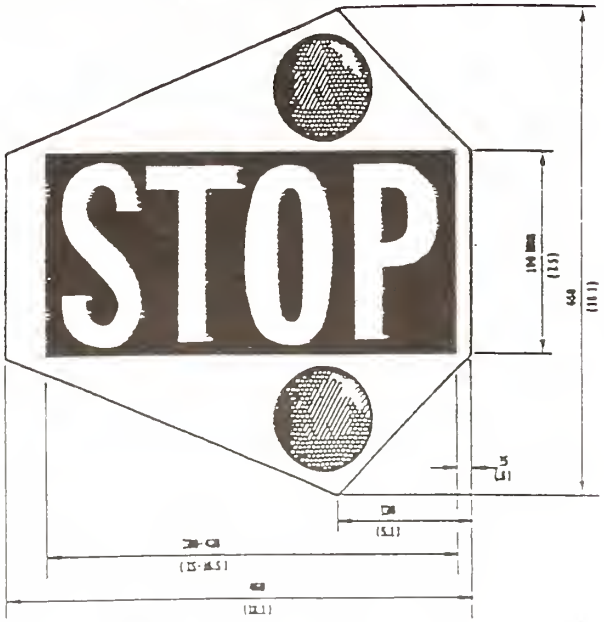
Section 440.ILLUSTRATION A Hexagon Shaped Stop Signal Arm (Repealed)

~~(One design that conforms to Section 12-803, IVC)~~

~~Optional Double Faced Red Lamps, 95-115 (3.5-4.5) diameter. Lamps, if installed, are to flash alternately top & bottom to warn front & rear when arm extends.~~



~~Word "STOP" at least 150 (6) high; stroke at least 20 (.8)~~
~~Dark areas Red, balance White~~
~~When red lamps are not installed, white areas, except letters, MUST be reflectorized. Letters may be reflectorized~~
~~Center word "STOP" on height and width of red background.~~
~~Front face shown; Rear face similar.~~
~~Dimensions are millimeters (inches). Tolerance ± 3 except as shown.~~

(Source: Repealed at __ Ill. Reg. _____, effective _____)

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~~When red lamps are not installed, white areas, except letters, MUST be reflectorized. Letters may be reflectorized.~~

~~Center word "STOP" on height and width of red background.~~

~~Front face shown; Rear face similar.~~

~~Dimensions are millimeters (inches). Tolerance plus or minus 3 except as shown.~~

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

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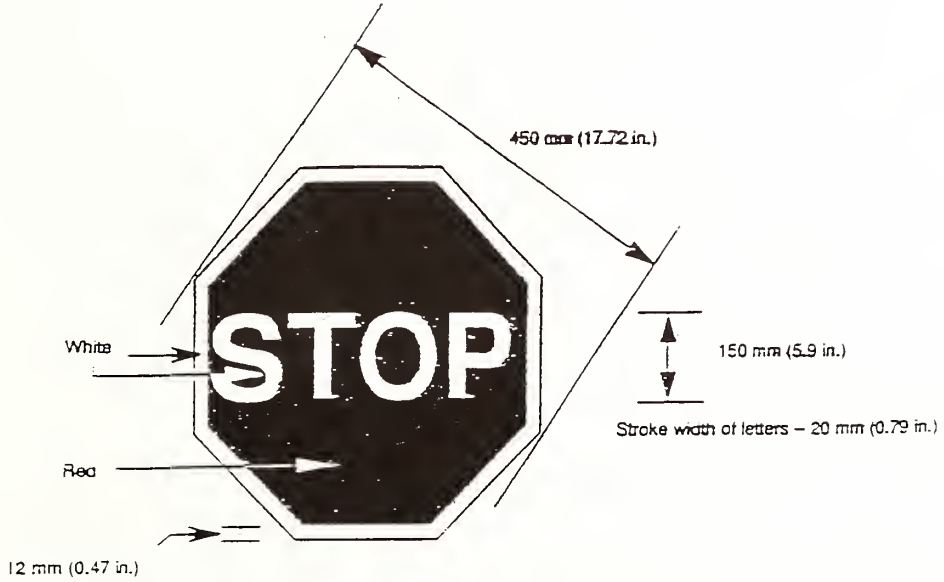
Section 440.ILLUSTRATION B Octagon Shaped Stop Signal Arm Panel



(Source: Amended at ___ Ill. Reg. _____, effective _____)

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(Source: Amended at 22 Ill. Reg. _____, effective _____)

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Section 440.APPENDIX A Federal Motor Vehicle Safety Standards (FMVSS) and Related Regulations (Repealed)

~~Availability~~
~~Parts--537,--560,--and--571--in--Title--49--of--the--Code--of--Federal--Regulations--(CFR)--are--available--in--those--public--libraries--and--other--places--that--maintain--files--of--the--CFR--and--of--the--Federal--Register--(FR).--Title--49--of--the--CFR--is--issued--each--October--1.--Between--annual--issues--it--is--kept--up--to--date--by--notices--published--in--the--Federal--Register,--which--is--issued--daily.~~
~~Additional--information--concerning--availability--and--contents--of--the--FMVSS--and--related--regulations--may--be--obtained--from:~~

~~Regional--Administrator~~
~~Region--5,--National--Highway--Traffic--Safety--Administration~~
~~1010--Dixie--Highway~~
~~Chicago--Heights,--IL--60411~~

~~Attn:--Ardelia--Pitts--(Phone:---312/756--1950)~~
~~Summary--Descriptions:~~
~~Part--567--"Certification"--specifies--the--content,--location(s),--and---other--requirements--for--a--label--affixed--to--vehicles--so--as--to--assist--a--consumer--in--determining--which--of--the--FMVSS--are--applicable--to--a--particular--vehicle.---A--vehicle--(such--as--a--body--on--chassis--school--bus)--that--is--manufactured--in--two--or--more--stages--must--be--certified--to--be--manufactured--in--conformance--with--the--applicable--provisions--of--FMVSS--in--effect--in--either--the--month--in--which--the--vehicle--was--completed,--or--the--month--in--which--the--incomplete--vehicle--was--manufactured,--or--any--month--between--those--months.~~
~~Part--568--"Vehicles--Manufactured--in--Two--or--More--Stages"--prescribes--the--method--by--which--the--manufacturers--of--such--vehicles--ensure--conformity--of--those--vehicles--with--the--FMVSS--and--related--regulations.---In--general,--each--manufacturer--is--advised--by--the--previous--manufacturer--of--action--taken--concerning--requirements--of--the--standards.---The--final--stage--manufacturer--of--a--school--bus--usually--effects--the--certification--of--conformance--as--specified--under--Part--567.~~
~~Part--571--"Federal--Motor--Vehicle--Safety--Standards"--sets--forth--the--actual--federal--safety--standards.--After--a--completed--vehicle--is--certified--and--until--the--vehicle--is--sold--for--use,--no--person--may--effect--an--alteration--that--affects--compliance--with--a--FMVSS.--The--"100--series"--standards--attempt--to--prevent--crashes.--The--"200--series"--attempt--to--reduce--accident--severity.---The--"300--series"--concern--post--accident--events.---The--attached--"Summary--Description"--of--FMVSS--applicable--to--buses--was--provided--by--federal--authorities.---(FMVSS--301--75,--also--covers--school--buses--10,000--pounds--or--more.)~~
~~In--a--notice--published--August--26,--1976,--on--page--36026--et--seq--in--Volume--41--of--the--Federal--Register--(41--FR--36026)--the--effective--dates--of--Standards--105--75,--217,--220,--221,--222,--and--301--75,--as--they--apply--to--school--buses,--were--postponed--from--October--1976--to--April--1,--1977.~~
~~Standard--No.--101---Control--Location,--Identification--and--Illumination~~
~~This--standard--requires--that--the--headlamps,--windshield--wiping--and--other--essential--controls--of--passenger--cars--be--labeled--and--within--the--reach--of--the--driver--restrained--by--a--lap--and--upper--torso--restraint--seat--belt.---Purpose--of--the--standard--is--to--facilitate--control--selection--and---insure---accessibility.--Effective--September--1,--1972,--the--applicability--was--extended--to--buses.~~
~~Standard--No.--102----Transmission--Shift--Lever--Sequence,--Starter--Interlock,--and--Transmission--Braking--Effect~~
~~This--standard--requires--all--vehicles--with--automatic--transmission--to--have--a--neutral--shift--lever--position--between--the--forward--and--reverse--drive--positions,--and--whenever--a--park--position--is--included--to--be--located--at--the--end--of--the--shift--lever--sequence--adjacent--to--the--reverse--drive--position.--If--the--shift--lever--is--mounted--on--the--steering--column,--the--shift--lever--movement--from--neutral--to--forward--shall--be--clockwise.---It--also--requires--an--interlock--to--prevent--starting--the--car--in--reverse--or--forward--drive--positions,--transmission--braking--capability--and--the--permanent--marking--of--the--shift--lever--sequence.--Its--purpose--is--to--reduce--the--likelihood--of--shifting--errors,--starter--engagement--with--vehicle--in--gear,--and--provide--supplemental--braking--at--speeds--below--25--miles--per--hour.~~
~~Standard--No.--103---Windshield--Defrosting--and--Defogging--Systems~~
~~The--standard--requires--that--all--passenger--cars,--multipurpose--passenger--vehicles,--trucks--and--buses--manufactured--for--sale--in--the--continental--United--States--be--equipped--with--windshield--defrosters.---The--purpose--of--the--standard--is--to--provide--visibility--through--the--windshield--during--frosting--and--fogging--conditions.---The--standard--provides--test--conditions--and--performance--requirements--for--passenger--car--defrosting--systems.---A--reeent--amendment--modified--the--wind--test--condition--procedure,--effective--9/1/75.~~
~~Standard--No.--104---Windshield--Wiping--and--Washing--Systems~~
~~This--standard--requires--that--all--buses--be--equipped--with--two--or--more--speed--power--driven--windshield--wipers--and--windshield--washer--systems.---Its--purpose--is--to--provide--improved--visibility--through--the--windshield--during--inclement--weather.--The--standards--includes--test--proeedures--and--performance--requirements--for--the--washer--systems--and--specifies--the--wiper--area--coverage--for--passenger--cars.~~
~~Standard--No.--105--75---Hydraulic--Brake--Systems~~
~~This--standard--requires--passenger--cars--to--have--brake--systems--capable--of--stopping--the--vehicle--under--speeified--conditions.-----Amendments---to---the---standard--included:--Upgraded--requirements--for--passenger--ears--and--extended--applicability--to--multipurpose--passenger--vehicles,--trucks--and--buses--effeetive--9/1/75--and--later--delayed--until--1/1/76,--permission--to--manufaeture--vehicles--without--split--service--brake--systems.---The--split--service--brake--system--incorporates--service--and--emergency--features--that--are--capable--of--stopping--the--vehicle--under--certain--specified--conditions,--such--as--"hot"--and--"wet"--fade,--partial--failure,--and--inoperative--power--assist.--The--parking--brake--system--must--be--capable--of--holding--light--vehicles--on--a--30--percent--grade--and--heavy--vehicles--on--a--20--percent--grade.--Warning--lights--are--required--to--indicate--loss--of--pressure,--low--fluid--level,--antilock--system--failure--and--parking--brake--application.---School--bus--braking--requirements--were--established--in--a--later--amendment--which--became--effeetive--October--12,--1976.~~
~~Standard--No.--106---Hydraulic--Brake--Hoses~~
~~The---initial---standard--establishes--minimum--requirements--for--brake--hoses--manufaetured--for--use--on--passenger--ears--and--multipurpose--passenger--vehicles.---An--amendment--to--the--standard--extends--the--applicability--to--all--motor--vehicles--and~~

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hydraulic, air and vacuum brake hoses, brake hose assemblies, and brake hoses and fittings for use in those vehicles. Other amendments modified requirements and established effective date of September 1, 1974, for brake hose and brake hose end fittings, March 1, 1975, for brake hose assemblies, and, September 1, 1975, for vehicles to which the standard applies. A recent amendment permits until August 31, 1976, manufacturing of motor vehicles with brake hose end fittings and assemblies which comply with all requirements of the standard.

Standard No. 107 Reflecting Surfaces

This standard requires that windshield wiper arms, inside windshield moldings, horn rings and the frames and brackets of inside rearview mirrors have matte surfaces which will reduce the likelihood of visual glare in the driver's eyes.

Standard No. 108 Lamps, Reflective Devices, and Associated Equipment

This standard specified requirements for lamps, reflective devices, and associated equipment, for signalling and to enable safe operation in darkness and other conditions of reduced visibility. It applies the Bureau of Motor Carrier Safety Regulations to a number of large vehicles not previously covered because they are used in intrastate operations. This standard also specifies appropriate lighting equipment for motorcycles, passenger cars and small multi purpose passenger vehicles, trucks, trailers, and buses. Sidemarker lights and reflectors, hazard warning lights and backup lights are included in the requirements for these vehicles. This standard has been amended several times increasing the safety performance levels of lighting systems. Several revisions were made in the standard, effective January 1, 1972, including the extension of the requirements to cover all applicable replacement equipment. Another amendment, effective January 1, 1973, affects turn signal and hazard warning signal flashers. Other amendments include minimum lighting requirements for mobile structure trailers, and revised requirements for rear lighting on small motor driven cycles, disallowance of 4 lamp rectangular systems, and clarification of electrical terminal specifications.

Standard No. 111 Rearview Mirrors

This standard requires rearview mirrors to provide the driver with a clear and reasonably unobstructed view to the rear. It requires an outside rearview mirror on the driver's side, and when the inside mirror does not provide a sufficient field of view because of the size or location of the rear window, an additional outside mirror on the passenger side is required. Also, the inside mirror must be designed to reduce the likelihood of injury on impact. It was amended to allow installation of truck type mirror systems in multipurpose passenger vehicles and to extend application to trucks and buses.

Standard No. 112 Headlamp Concealment Devices

This standard specifies that any fully opened headlamp concealment device shall remain fully opened whether either or both of the following occur: (a) any loss of power to or within the device or (b) any malfunction of wiring or electrical supply for controlling the concealment device occurs. Its purpose is to eliminate the possibility of loss of forward visibility due to malfunction of the headlamp concealment device, a problem with some such devices.

Standard No. 113 Hood Latch Systems

This standard, effective January 1, 1969, specifies requirements for a hood

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latch system for each hood. A front opening hood, which in an open position, partially or completely obstructs a driver's forward view through the windshield, must be provided with a second latch position on the hood latch system or with a second hood latch system.

Standard No. 116 Hydraulic Brake Fluids

This standard specifies minimum physical characteristics for two grades of brake fluids, DOT 3 and DOT 4, for use in hydraulic brake systems of all motor vehicles. In addition, the standard establishes labeling requirements for all brake fluid containers. An amendment established performance requirements for an additional type of brake fluid, DOT 5, which can operate at high temperatures and does not absorb moisture.

Standard No. 119 New Pneumatic Tires

This standard specifies performance and labelling requirements for new pneumatic tires designed for highway use on multipurpose passenger vehicles, trucks, buses, trailers and motorcycles manufactured after 1940, and requires treadwear indicators in tires, and rim matching information concerning those tires. It was amended changing the effective date from 9/1/74 to 3/1/75. It was further amended changing, in several respects, the definitions, labelling and performance provisions of the standard.

Standard No. 120 Tire Selection and Rims

This standard requires new vehicles to have tires conforming to Standard No. 119 and rims designated in the tire association manuals as fitting them. It specifies marking requirements for rims and requires additional tire and rim size designation, pressure and speed restrictions and weight rating information to the placed on the existing certification label.

Standard No. 121 Air Brake Systems

This standard establishes significantly improved performance requirements which will not only shorten stopping distances but will eliminate most jackknife accidents. Amendments moved the effective date of the Standard from 9/1/74 to 1/1/75, for trailers, to 3/1/75, for trucks and buses, to 9/1/75 for firefighting vehicles, and to 9/1/76, for a group of special vehicles. Specialized vehicles were exempted from the Standard altogether and reduced requirements were specified for certain vehicles for an interim period of time. The emergency braking requirements of the Standard were amended effective 9/1/76, and other minor changes were made to the requirements. Other amendments established new service brake system stopping distances until 1/1/70, and increased brake actuation times and permitted bulk agricultural commodity trailers to meet other emergency and parking brake requirements.

Standard No. 124 Accelerator Control Systems

This standard establishes requirements for the return of a vehicle's throttle to the idle position when the driver removes the actuating force from the accelerator control, or in the event of a breakage or disconnection in the accelerator control system.

Standard No. 205 Glazing Materials

This standard specifies requirements for all glazing materials used in windshields, windows, and interior partitions of motor vehicles. Its purpose is to reduce the likelihood of lacerations to the face, scalp, and neck, and to minimize the possibility of occupants penetrating the windshield in collisions.

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It requires, among other things, that windshields be of a type that tend to cushion those that impact them, rather than allowing head penetration and even decapitation - a problem with older windshields. An amendment to this standard added two new categories of glazing materials, amended the certification requirements, and made minor changes to the chemical resistance tests.

Standard No. 207 - Seating Systems

This standard establishes requirements for seats, their attachment assemblies, and their installation to minimize the possibility of failure as a result of forces acting on the seat on vehicle impact. This standard was amended, effective January 1, 1972, to extend applicability to the driver's seat of buses.

Standard No. 208 - Occupant Crash Protection

This standard amends Standard No. 208, Seat Belt Installations, by specifying requirements for both active and passive occupant crash protection systems for passenger cars, multipurpose passenger vehicles, trucks and buses. Effective January 1, 1972, passenger cars were required to have improved safety belt systems which incorporate automatic adjuster, single point release and a belt use warning system. Effective August 15, 1973, passenger cars were required to provide occupant crash protection for front seating positions by passive means that require no action by vehicle occupants or to provide belt starter interlock systems. Light trucks and multi purpose passenger vehicles were required to have one of these systems after August 15, 1975. An amendment disallowed the starter interlock systems and establishes requirements for a visual signal, a "Fasten Seat Belt," sign and an audible signal that operates for a 4 to 8 second period after the ignition is operated, effective February 25, 1975, for passenger cars and January 1, 1976 for multi purpose passenger vehicles and light trucks. A recent amendment continues present options for occupant protection in passenger cars until August 31, 1976.

Standard No. 209 - Seat Belt Assemblies

The National Bureau of Standard's vehicle seat belt specifications, orginally incorporated by reference, were made a part of this standard in 1960. In order to mitigate the results of an accident to a person in a motor vehicle, the standard specifies requirements for seat belt assemblies. The requirements apply to straps, webbing (or similar devices), buckles, fasteners, and all hardware designed for installing the assembly in a motor vehicle. This standard was amended to upgrade webbing abrasion, buckle crush, and emergency locking requirements, and to revise retraction forces required of emergency locking retractor.

Standard No. 210 - Seat Belt Assembly Anchorages

Specifies requirements for seat belt anchorages to insure effective occupant restraint and to reduce the likelihood of failure in collisions. Requires anchorages for lap and upper torso restraint belts in forward facing outboard seats of cars. The standard was extended to driver's seats in buses effective January 1, 1972.

Standard No. 213 - Child Seating Systems

Specifies requirements for child seating systems to minimize the likelihood of injury to 20 50 lb. children in vehicle crashes or sudden stops by ejection or contact with a child seating system. Requires providing information for proper

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installation and use.

Standard No. 217 - Bus Window Retention and Release

Establishes minimum requirements for bus window retention and release to reduce likelihood of passenger ejection in accidents and to enhance passenger exit in emergencies. Effective September 1, 1973. It was amended to exempt certain buses manufactured to transport persons under physical restraint and to clarify marking requirements. It was amended further to require that each school bus have an interlock system which will prevent the engine from starting if an emergency door is locked and to have an audible warning system which will sound an alarm if an emergency door release mechanism is not closed while the engine is running, effective April 1, 1977.

Standard No. 219 - Windshield Zone Intrusion (Passenger Cars 9/1/76, Multipurpose Passenger Vehicle, Truck, & Bus of 10,000 lbs. or less GVWR 9/1/77)

This standard's purpose is to reduce crash injuries that result from occupants contacting vehicle components displaced near or through the windshield. The standard regulates intrusion of vehicle parts from outside the occupant compartment into a defined zone in front of the windshield during a frontal barrier crash test. An amendment changed effective dates as noted above and substituted "daylight opening" for "windshield opening."

Standard No. 220 - School Bus Rollover Proteetion

This standard specifies performance requirement for the structural integrity of the passenger compartment of school buses when subjected to forces that can be encountered in rollovers. The standard requires that, upon the application of vertical downward force to the bus roof equal to 1 1/2 times the vehicle's unloaded weight, the vehicle roof shall not crush more than 5 1/8 inches, and the emergency exits shall be capable of being opened, with the weight applied and after its release.

Standard No. 221 - School Bus Body Joint Stength

This standard addresses the problem of exposure of school bus passengers to sharp metal edges when, during an accident, body panels become separated from the structural components to which they have been fastened. It seeks to reduce the likelihood of lacerations by requiring that body joints on school buses have a tensile strength equal to 60 percent of the tensile strength of the weakest joint body panels.

Standard No. 222 - School Bus Passenger Seating & Crash Proteetion

This standard specifies seating, restraining barrier, and impact zone requirements for school buses. The standard relies on compartmentalization between well padded and well constructed seats to provide occupant proteetion on school buses.

Standard No. 301 - Fuel System Integrity

The original standard specifies requirements for the integrity and security of fuel tanks, fuel tank filler pipes, and fuel tank connections to minimize fire hazard as a result of collision in all passenger cars manufactured after January 1, 1960. This standard was amended to substantially upgrade the performance requirements. The effective date is September 1, 1975, with additional requirements. The effective date is September 1, 1976, and September 1, 1977. The standard now covers all vehicles under 10,000 pounds

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~~(except motorcycles) and requires preservation of fuel system integrity by limiting fuel spillage incidental to severe front, rear, and lateral crash tests.~~
~~Standard No. 302 Flammability of Interior Materials~~
~~Specifies burn requirements for materials used in the compartments of motor vehicles. An amendment, effective October 1, 1975, modifies the test procedures and specimen preparation requirements.~~

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

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Section 440.APPENDIX B First Aid Kit Requirements (Referred to in Section 440.420(k) (Repealed)

~~The first aid kit shall conform to the following portions of the Federal Motor Carrier Safety Regulations (49 CFR 390 397):~~
~~Section 393.96 Buses, additional emergency equipment.~~
~~On every bus, except buses engaged in driveaway towaway operations, there shall be:~~

~~a) Not Applicable.~~
~~b) Not Applicable.~~
~~c) One first aid kit complying with the following requirements:~~
~~1) Size of kit. The kit shall be of heavy duty 10 unit type or larger, or have contents at least equivalent in quality and number to the contents of such a kit.~~
~~2) Material for case and cover. The case and the cover shall be substantially constructed of sheet steel, wood, fiber, or other durable material. If made of sheet steel, the case and cover shall be of metal at least number 24 U.S. Gage (nominal).~~
~~3) Tightness of case. The case and cover shall be so constructed, including corners, covers, and closure means, that it shall be reasonably dust and weather proof when the cover is in the closed position, or the kit shall be mounted in a protected location within the passenger compartment of the motor vehicle so as to be reasonably dust and weather proof.~~
~~4) Opening and stop for cover. If made of sheet steel or other metals, the case shall be so designed and constructed that the cover will be capable of being easily opened to an angle of 90° to 100° with the case and a substantial stop shall be provided at the angle of full opening. Such stop shall not interfere with the smooth operation of the cover.~~
~~5) Method of hinging cover. If made of metal, the cover shall be attached to the case by, at least, two substantial hinges or by a continuous piano type hinge. If nonmetallic, the cover shall be attached by either a sliding or a hinged joint; if hinged, it shall be as prescribed for metallic construction.~~
~~6) Size of case. The dimensions of the case shall be such as to permit the contents to be easily extracted and yet maintain the contents in a relatively fixed position.~~
~~Contents of kit. The kit shall contain at least the contents specified, in not less than the quantities shown, in either of the two following types of kits:~~

~~A Unit Type Kit~~

~~4 inch bandage compress ..... 2 packages~~
~~2 inch bandage compress ..... 2 packages~~
~~1 inch adhesive compress ..... 1 package~~
~~40 inch triangular bandage with two safety pins ..... 1 package~~

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Wire-or-wood-splint.....1-package

B--Commercial-Type-Kit

3"-x-3"-sterile-gauze-pads.....3-packages-of-10
Gauze-bandages-as-follows:
--2-inch-by-5-yards,-or-longer.....10-packages
3/4-inch-adhesive-compress.....package-of-10,-or-more
1-inch-by-2-1/2-yards-adhesive-tape.....1-roll
40-inch-triangular-bandage-with-two-safety-pins.....1-package
Wire-or-wood-splint.....1-package
Scissors.....1
Each-kit-shall-contain-instructions-for-the-use-of-the--contents.
The-contents-of-the-kits-shall-conform-either-to-the-requirements
contained--in--Federal-Specification-GG-K-391(a)-(Oct.-19,-1954),
as-amended-March-3,-1959,--or--the--standards--as--found--in--the
Fifteenth--Revision-of-the-Pharmacopoeia-of-the-United-States-and
Supplement-No.-2-thereof-dated-September-1,-1958,-except-that-the
40-inch-triangular-bandage-in-the--commercial--type--kit--may--be
non-sterile--and--not--compressed--in--the-required-manner-if-the
package-containing-it-clearly--indicates--the--contents--are--not
sterile.---No--specification--type--scissor-is-required.--Federal
Specification-GG-K-391(a)-and-amendments-may-be-obtained-from-the
Superintendent-of-Documents,-Washington,-D.C.-20402.

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

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Section 440.APPENDIX C Specification Sheet Reflective Material -- Encapsulated Lens (Based on FHWA Notice N 5040.17, June 15, 1976) (Repealed)

I. Description
The--reflective-sheeting-covered-by-this-specification-shall-be-of-the encapsulated-lens-type-consisting-of-spherical-lens--elements--adhered to--a--synthetic--resin--and--encapsulated-by-a-flexible,-transparent, weatherproof-plastic-having-a--smooth--outer--surface.---The--sheeting shall--have--a--pre-coated--adhesive--backing-protected-by-a-removable liner.

II. Color-Requirements
The-diffuse-day-color-of-the-reflective-material-shall-conform-to--the color--specification-shown-below-and-shall-be-determined-in-accordance with--ASTM-E97-55(1971),--"Standard--Method--of--Test--for--45-Degree, 0-Degree--Directional--Reflectance--of--Opaque--Specimens--by---Filter Photometry."----(Geometric---characteristics---must---be--confined--to illumination-incident-within-10-degrees--of,--and--centered--about,--a direction--of--45--degrees-from-the-perpendicular-to-the-test-surface, viewing-is-within-15-degrees-of,-and-centered-about,-the-perpendicular to-the-test-surface.--Conditions-of-illumination-and-observation--must not--be-interchanged.)--The-standard-to-be-used-for-reference-shall-be the-MUNSELL-PAPER--designated--below.---The--paper--must--be--recently calibrated--on--a-spectrophotometer.--The-test-instrument-shall-be-one of-the-following:

1) Gardner-Multipurpose-Reflectometer
2) Gardner-Model-AC-2a-Color-Difference-Meter
3) Meeco-Model-V-Colormaster
4) Hunterlab-D25-Color-Difference-Meter

	Color-Specification-Limits-And-Reference-Standard						
	Chromaticity-Coordinates (Corner-Points)				Reflectance Limit		Ref.-Std -----Munsell Paper
	1	2	3	4	Y		
	x-------y	x-------y	x-------y	x-------y	Min.-----Max.		
Yellow 6/12	.490-.412	.557-.442	.479-.520	.438-.472	16.0-----40.0		1.25Y

For-requirements-for-colorfastness-of-weathered-material-see-IX,-Durability.

III. Reflective-Intensity
The-reflective-sheeting-shall-have-minimum-reflective-intensity-values tabulated-below,-at-0.2°-and-0.5°-divergence,-expressed-as-candlepower per-foot-candle-per-square-foot-(candelas-per-lux-per-square-meter)-of material.--Reflective-intensity-shall-be-determined-by--the--following method:
Apparatus
Arrangement--for--the--reflective--intensity-test-shall-be-as-shown-in Fig.-1.-A-light-projector-having-a-maximum-lens--diameter--of--1--inch (2.54--cm)--and-capable-of-projecting-a-uniform-light-shall-be-used-to illuminate-the-sample.--The-light-falling-on-the-sample-shall--have--a

color--temperature--of--2856K--(equivalent-to-CIE-Std.-Source-A).--The light-reflected-from--the--test--surface--shall--be--measured--with--a photo-electric--receiver--whose--response--has--been-corrected-for-the color-sensitivity-of-the-average-photopic-human-eye.---The--dimensions of--the-active-area-of-the-receiver-shall-be-such-that-no-point-on-the perimeter-is-more-than--one-half--inch--(1.27--cm)--from--the--center. Samples--shall-be-mounted-on-a-flat-black-test-surface-not-less-than-3 feet-(91.4-cm)-square-which,-when-tested--without--any--sample,--shall give--no--appreciable--reading.---The-sample-shall-be-50-feet-(15.24m) plus-or-minus-2-inches-(5.08-cm)--from--the--projector--lens--and--the receiver.----The--maximum-effective-area-of-the-test-sample-shall-be-1 square-foot-(.093-sq.-m).--The-maximum-dimension-of--the--test--sample shall-be-not-greater-than-1.5-times-the-minimum-dimension.

Test-Procedure

Measure--the--distance-from-the-projector-to-the-specimen,-the-area-of the-test-surface,-and-the-illumination-incident-on-the--test--surface. Measure--the--illumination--incident-on-the-receiver-due-to-reflection from-the-test-surface-at-each-angel-of-incidence--for--each--angle--of divergence.---The--angles--of--incidence--shall--be-as-required-in-the applicable-reflectivity-table.--The-angles-of-divergence-shall-be--0.2 and--0.5--degrees.---The-illumination-incident-on-the-test-surface-and the-receiver-shall--be--measured--in--the--same--units.---Compute--the reflective-intensity,-R,-from-the-following-equation:

$$R = \frac{Er-(d)}{Es-(A)}$$

Where:--R-= Reflective-intensity

Er-= Illumination-incident-upon-the-receiver

Es-= Illumination--incident--upon--a--place--perpendicular-to-the incidence ray-at-the-specimen-position,-measured-in-the-same-units-as-Er.

d-= Distance-in-feet-from-the-specimen-to-the-projector.

A-= Area-in-square-feet-of-the-test-surface.

Minimum-Reflective-Intensity-Values

Divergence-Angle-(°)	Incidence-Angel-(°)	Yellow
0.2	--4	170
0.2	+30	90
0.5	--4	62
0.5	+30	36

The-brightness-of-the-reflective-sheeting-when-totally-wet,-shall--not be--less--than--90--percent--of--the--dry--values--shown--above.---Wet performance--measurements--shall--be--made--on-unweathered-sheeting-in accordance-with-the-standard-rainfall-test-specified-below.

Reflective-Intensity-During-Rainfall

The-reflective-intensity--under--simulated--rainfall--conditions--(wet performance)-shall-be-determined-as-follows-using-the-water-nozzle-and test-setup-shown-in-Figure-2.

Place--the--test--panels--on-which-the-sheeting-has-been-applied-in-an upright-position-6-inches-(15.24-cm)-below-and-4-inches-(10.16-cm)--in front-of-the-water-nozzle-as-shown-in-Figure-2.

Apply-sufficient-water-pressure-so-that-the-upper-surface-of-the-spray envelope--strikes--the-top-of-the-specimen.--With-water-falling-on-the specimen,-determine--the--reflective--intensity,--at--angles--of--0.2° divergence--and--minus--4°--incidence-only,-as-specified-above,-except that-the-measurement-shall-be-made-on-each-specimen-and-the-reflective intensity--during--rainfall--shall--be--the--average--of---the---three determinations.

IV. Specular-Gloss

The--reflective-sheeting-shall-have-an-85-degree-specular-gloss-of-not less-than-50-when-tested-in-accordance-with-ASTM-D-523-67-(1972).

V. Shrinkage

A-9-inch-by-9-inch-(22.9-cm-by-22.9-cm)-reflective--sheeting--specimen with--liner--shall-be-conditioned-a-minimum-of-1-hour-at-72°-F-(23°-C) and-50-percent-relative-humidity.--The-liner-shall-be-removed-and--the specimen--placed--on--a--flat--surface-with-the-adhesive-side-up.--Ten minutes-after-liner-is-removed-and-again-after-24-hours,-the--specimen shall--be-measured-to-determine-the-amount-of-dimensional-change.--The reflective-sheeting-shall-not-shrink-in-any-dimension-more--than--1/32 inch--(0.79--mm)--in-10-minutes-nor-more-than-1/8-inch-(3.10-mm)-in-24 hours.

VI. Flexibility

The-reflective-sheeting,-with-the-liner-removed-and-conditioned-for-24 hours-at-72°-F-(22°-C)-and-with-50-percent-R.H.-shall-be--sufficiently flexible--to--show--no--cracking-when-slowly-bent-in-one-second's-time around-a-1/8-inch-(3.2-mm)-mandrel.--Note:--For-ease-of-testing-spread talcum-powder-on-adhesive-to-prevent-sticking-to-mandrel.

VII. Adhesive

The-reflective-sheeting-shall-include-a-precoated--pressure--sensitive adhesive--backing-which-may-be-applied-without-necessity-of-additional adhesive-coats--on--either--the--reflective--sheeting--or--application surface.

The--adhesive--backing--shall--be-a-pressure-sensitive-adhesive-of-the aggressive-tack-type-requiring-no-heat-solvent--or--other--preparation for-adhesive-to-smooth-clean-surfaces.

The--protective--liner--attached--to--the-adhesive-shall-be-removed-by peeling-without-soaking-in-water-or-other-solvents--without--breaking, tearing--or--removing--any--adhesive-from-the-backing.---The-protective liner-shall-be-easily-removed--following--accelerated--storage--for--4 hours-at-160°-F-(71°-C)-under-a-pressure-of-2.5-pounds-per-square-inch (17.24kPa).

The--adhesive--backing-of-the-reflective-sheeting-shall-produce-a-bond to-support-a-1-3/4-pounds-(0.79-kg)-mass-for-5--minutes,--without--the bond--peeling--for--a--distance-of-more-than-2.0-inches-(5.08-cm)-when applied-to-a-smooth-aluminum-surface-and-tested-as-specified-below:

Adhesion-Test---Subject-two-2-inch-(5.08-cm)-by-6-inch-(15.24-cm)

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pieces of the reflective material to a temperature of 160° F (66° C) and a pressure of 2.5 pounds per square inch (17.24 kPa) for 4 hours. Bring the materials to equilibrium at standard conditions and cut one 1 inch (2.54 cm) by 6 inch (15.24 cm) adhesion specimen from each piece and remove the liner by hand without the use of water or other solvents. During removal of the liner, it shall be noted whether any liner breaks or tears or removes any adhesive from the baking. Apply 4 inches (10.16 cm) of one end of each specimen to a test panel. Suspend the panels in a horizontal position with the specimen facing downward. Attach a 1 3/4 pound (0.79 kg) mass to the free end of each specimen and allow it to hang free at an angle of 90° to the panel surface for 5 minutes. At the end of the 5 minute period, check the distance of peeling. Failure of any one specimen shall constitute failure of the test.

VIII. Impact Resistance

The reflective sheeting material, applied according to the manufacturer's recommendations to a cleaned, etched aluminum panel of alloy 6061 T6, 0.40 inches by 3.0 inches by 5 inches (10 mm by 7.6 cm by 12.7 cm) and conditioned for 24 hours at 72° F (23° C) and 50 percent RH, shall show no cracking when the face of the panel is subjected to an impact of 2.0 pound (0.9 kg) mass with a 5/0 inch (15.9 mm) rounded tip dropped from a 10 inch pound (1.13 joule) setting on a Gardner Variable Impact Tester, IG 1120.

IX. Durability

Processed and applied in accordance with recommended procedures the reflective material shall be weather resistant and, following cleaning, shall show no appreciable discoloration, cracking, blistering or dimensional change and shall not have less than 70 percent of the specified minimum reflective intensity values (Table II) when subjected to accelerated weathering for 2200 hours in accordance with ASTM Standard G23 69, Type E or EH Wentherometer.

Colorfastness

One of the specimens prepared and subjected to accelerated weathering specified above shall be used to test for colorfastness. Wet out the specimen with a mild detergent and water solution and compare it with a similarly treated unexposed specimen under natural (North sky) daylight or artificial daylight having a color temperature of 7500 K. The colorfastness shall be evaluated as follows:

Excellent No appreciable change in color

Good Perceptible but no appreciable change in color

Fair Appreciable change in color

Appreciable change in color means a change that is immediately noticeable in comparing the exposed specimen with the original comparison specimen. If closer inspection or a change of angle of light is required to make apparent a slight change in color, the change is not appreciable. The reflective material must show "good" colorfastness or better.

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Fungus Resistance

For use in areas where fungus growth may be a problem and if deemed necessary by the purchaser, fungus resistance shall be determined as specified herein.

After inoculation with the test organism, Aspergillus niger, and incubation for 14 days, the reflective material shall show no appreciable formation of fungus growth. Any formation of fungus growth shall be non injurious to the reflective material and shall be removable by wiping with a soft cloth. After completion of the incubation and after being wiped clean, the reflective material shall retain the full reflective intensity values as specified in Table II. The reflective material shall not be removable from the test panel without damage.

Test Organism

The test organism used in this test shall be Aspergillus niger, ATCC No. 6275. (This organism may be obtained upon request from the American Type Culture Collection (ATCC), 12301 Parklawn Drive, Rockville, Maryland 20852, or Mycology Laboratory, PRL, U.S. Army Natick Laboratories, Natick, Massacusetts 01760.) Cultures of this organism shall be carefully maintained on a potato dextrose agar medium and promptly renewed if there is evidence of contamination. The stock cultures may be kept for not more than 4 months in a refrigerator at a temperature from 37.4° to 50° F (3° to 10° C). Subcultures incubated at 02.4° to 06° F (20° to 30° C) for 10 to 14 days shall be used in preparing the inoculum.

Culture Medium

The culture medium shall have the following composition:

NaNO	3.0 grams
KHP	1.0 gram
MgSO-7H	0.5 gram
KCl	0.25 gram
Agar	15.0 grams

Distilled water to make 1,000 ml.

The pH shall be 5.5 to 6.5. If otherwise, adjust to that range with HCl or NaOH. After mixing, the ingredients shall be sterilized by autoclaving for 15 minutes at 15 p.s.i. and 250° F (103.4 kPa and 121° C). Under sterile conditions, the medium shall be poured into six 150mm by 20 mm petri dishes, about 65 ml per dish, and allowed to harden.

Inoculum

Add about 10 ml of sterile, distilled water containing about 0.005 percent of nontoxic wetting agent to a subculture (10 to 14 days old) of the test organism in a ripe, fruiting condition. The spores shall be forced into suspension with a sterile camel's hair brush (or other suitable means) and diluted to 100 ml with sterile, distilled water.

Preparation of Specimens

Cut three 3 inch by 3 inch (7.62 cm by 7.62 cm) specimens from the sample and apply to test panels with the reflective surface up.

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~~Completely--immerse--the--test--specimens--in--a--leaching---tank---of continuously--flowing-water-for-24-hours-and-then-remove-and-dry.---The leaching-tank-shall-be--large--enough--to--hold--an--amount--of--water weighing--not--less--than--50--times-the-weight-of-the-specimens.---The water-entering-the-tank-shall-not-fall-directly-on-the--specimens--and shall--flow-at-a-rate-of-5-to-10-liters-per-hour.---The-pH-of-the-water shall-be-in-the-range-of-6.0-to-8.0.~~

~~Inoculation~~

~~Under-aseptic-conditions,-dip-each-specimen-in-70-percent-ethanol--for a--few--seconds,--rinse--in--distilled--water,-and-place-firmly-on-the surface-of-the-solidified-agar-medium-contained-in-the--petri--dishes. Place-specimens-with-the-reflective-surface-facing-up,-one-specimen-to each--dish.---With--a--sterile--pipette,--distribute--1.0-to-1.5-ml-of inoculum-over-the-surface-of-each-specimen-and-the-surrounding-medium.~~

~~Incubation-Period~~

~~The-period-of-incubation-shall-be-14-days-at-a-temperture-of-84.2°--to 89.6°-F-(29°-to-32°-C)-and-85-to-90-percent-relative-humidity.~~

~~Control~~

~~Test--three--control-specimens-of-untreated,-porous-grade-filter-paper with-the-specimens-of-the-reflective-material-to-check--the--viability of--the--inoculum.---At-the-end-of-the-incubation-period,-the-controls should-be-covered-with-fungus-growth.~~

~~Test-Results~~

~~Upon-completion--of--the--incubation--period,--examine--the--specimens visually--for--fungus-growth.--Wipe-the-specimen-with-a-soft-cloth-wet with-a-70--percent--ethanol--solution.---Condition--the--specimens--at standard--conditions--for--40-hours.--Test-the-specimens-in-accordance with-Part-III,-Reflective-Intensity,-and--when--finished,--attempt--to remove-specimen-from-the-test-panel.~~

(Source: Repealed at 22 Ill. Reg. _____, effective _____)

DEPARTMENT OF HUMAN SERVICES

NOTICE OF ADOPTED AMENDMENTS

1) Heading of the Part: Illinois Long-Term Care Partnership Program

2) Code Citation: 89 Ill. Adm. Code 688

3)

Section Numbers:	Adopted Action:
688.10	Amended
688.20	Amended
688.30	Amended
688.40	Amended

4) Statutory Authority: Partnership for Long-Term Care Act [320 ILCS 35] and Section 3(g) of the Disabled Persons Rehabilitation Act [20 ILCS 2405/3(g)].

5) Effective Date of Amendments: March 13, 1998

6) Does this rulemaking contain an automatic repeal date? No

7) Does this amendment contain incorporations by reference? No

8) Date Filed in Agency's Principal Office: March 5, 1998

9) Notice of Proposal Published in Illinois Register:

March 7, 1997, 89 Ill. Reg. 2945 (issue date)

10) Has JCAR Issued a Statement of Objections to this (these) Rule(s)? No

11) Difference(s) between proposal and final version: In Section 688.20(b)(1), changed "89 Ill. Adm. Code 687.200" to "89 Ill. Adm. Code 682.200".

12) Have all the changes agreed upon by the agency and JCAR been made as indicated in the agreement letter issued by JCAR? Yes

13) Will this rule replace an Emergency Rule(s) currently in effect? No

14) Are there any amendments pending on this Part: No

15) Summary and Purpose of Rule(s): The Department is filing this rule to amend this Part to assure coordination of four State agencies who are partners in the Illinois Long-Term Care Partnership Program. The rules are being revised to respond to the legislative changes signed into law. Specifically, the word "demonstration" is removed from the rules and the Eligibility Requirements Section 688.20 is revised.

16) Information and answers to questions regarding this adopted rule shall be directed to:

DEPARTMENT OF HUMAN SERVICES

NOTICE OF ADOPTED AMENDMENTS

Ms. Susan Weir, Bureau Chief
Bureau of Administrative Rules and Procedures
Department of Human Services
100 South Grand Avenue East
3rd Floor, Harris Bldg.
Springfield, Illinois 62762
Telephone number: (217) 785-9772
TTY: (217) 557-1547

The full text of Adopted Amendments begins on the next page:

DEPARTMENT OF HUMAN SERVICES

NOTICE OF ADOPTED AMENDMENTS

TITLE 89: SOCIAL SERVICES
CHAPTER IV: DEPARTMENT OF HUMAN SERVICES
SUBCHAPTER d: HOME SERVICES PROGRAM

PART 688
Illinois Long-Term Care Partnership ~~Demonstration~~ Program

Section
688.10 Authority and Purpose
688.20 Eligibility Requirement
688.30 Appeals
688.40 Scope of Services

AUTHORITY: Partnership for Long-Term Care Act [320 ILCS 35] and Section 3(g) of the Disabled Persons Rehabilitation Act [20 ILCS 2405/3(g)].

SOURCE: Adopted at 18 Ill. Reg. 11267, effective June 30, 1994; recodified from the Department of Rehabilitation Services to the Department of Human Services at 21 Ill. Reg. 9325; amended at 22 Ill. Reg. 5890, effective MAR 13 1998.

Section 688.10 Authority and Purpose

a) In conjunction with the Illinois Department on Aging, the Illinois Department of Insurance, and the Illinois Department of Public Aid, this Part is promulgated pursuant to Public Act 87-163, the Partnership for Long-Term Care Act.

b) The purpose of this regulation is to implement Public Act 87-163 and Public Act 89-525 through the establishment of a private/public Long-Term Care Insurance ~~Demonstration~~ Program. This program will allow individuals who purchase private long-term care insurance that meets State standards, and who sustain extended periods of chronic illness that exhaust their private insurance benefits, to be eligible for continued in home support services through the Medicaid program based on their meeting specific resource eligibility requirements.

(Source: Amended at 22 Ill. Reg. 5890, effective MAR 13 1998)

Section 688.20 Eligibility Requirement

An individual under age 60 whose Long-Term Care Partnership ~~Demonstration~~ Program benefits have been exhausted shall be considered eligible for the DHS Home Services Program, as set forth in 89 Ill. Adm. Code 682 ~~685 and 690~~, with the following exceptions:

a) Points scored on the Determination of Need (DON) need only be at least 15 points on Part A of the DON, at least 10 points of which may be earned on the Mini-Mental State Exam (MMSE); and

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b) Non-exempt assets:
   1) cannot exceed the sum of qualifying insurance benefit payments made as the result of coverage under a Long-Term Care Partnership Insurance Policy as described in 50 Ill. Adm. Code 2018 provided that the person has received all of the qualifying insurance benefit payments that are payable under the policy plus non-exempt assets as contained within 89 Ill. Adm. Code 682.200; or
   2) shall be disregarded for a person who purchased a certified Long-Term Care Partnership Insurance policy with an amount of coverage equal to, or greater than, the average of 4 years of long-term care services in a nursing facility, provided that the person has received all the qualifying insurance benefit payments that are payable under the policy.

~~a) non-exempt--assets--cannot--exceed--the--sum--of--qualifying-insurance benefit-payments-made-as-the-result-of-coverage-under-a-Long-Term-Care Partnership-Insurance-Policy-as-described-in-50-Ill.-Adm.-Code-2018 plus-non-exempt-assets-as-contained-within-89-Ill.-Adm.-Code-687.200;~~

~~b) points-scored-on-the-Determination-of-Need-(DON)-need-only-be-at-least 15--points--on--Part--A-of-the-DON,-at-least-10-points-of-which-may-be earned-on-the-Mini-Mental-State-Exam-(MMSE);~~

(Source: Amended at 22 Ill. Reg. 5890, effective MAR 13 1998)

Section 688.30 Appeals

a) Pursuant to 50 Ill. Adm. Code 2018.100 individuals under age 60 have the right to appeal a determination of ineligibility for benefits or a designated plan of care under the Long-Term Care Partnership ~~Demonstration~~ Program by contacting DHS. These appeals will be conducted in accordance with 89 Ill. Adm. Code 510. The Level I Hearing Officers for appeals under this Section will be the HSP Advisors. Level II appeals will be heard pursuant to 89 Ill. Adm. Code 510.90.

b) Individuals who have reached 60 years of age or more may appeal a determination of ineligibility pursuant to 89 Ill. Adm. Code 260.300.

(Source: Amended at 22 Ill. Reg. 5890, effective ~~MAR 1 3 1998~~)

Section 688.40 Scope of Services

a) Individuals qualifying for the DHS Home Services Program, as the result of having participated in the Long-Term Care Partnership ~~Demonstration~~ Program, shall receive services as defined in 50 Ill. Adm. Code 2018.30, provided through the Partnership ~~Demonstration~~ Program.

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b) Services provided through the Partnership ~~Demonstration~~ Program cannot exceed the maximum payment levels described in 89 Ill. Adm. Code 682.250 ~~685.600~~.

(Source: Amended at 22 Ill. Reg. 5890, effective MAR 13 1998)

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NOTICE OF ADOPTED AMENDMENTS

1) Heading of the Part: Subacute Alcoholism and Substance Abuse Treatment Services

2) Code Citation: 77 Ill. Adm. Code 2090

3)

Section Numbers:	Adopted Action:
2090.20	Amendments
2090.35	Amendments
2090.40	Amendments

4) Statutory Authority: Implementing and authorized by Section 5-10 of the Alcoholism and Other Drug Abuse and Dependency Act [20 ILCS 301/5-10].

5) Effective Date of Amendments: March 13, 1998

6) Does this rulemaking contain an automatic repeal date? No

7) Does this rule amendment contain incorporations by reference? Yes

8) Date Filed in Agency's Principal Office: March 5, 1998

9) Notice of Proposal Published in Illinois Register: October 24, 1997, 21 Ill. Reg. 13993

10) Has JCAR Issued a Statement of Objections to this (these) Rule(s)? No

11) Difference(s) between proposal and final version: In Section 2090.35(c)(3) updated the CFR to 1997.

12) Have all the changes agreed upon by the agency and JCAR been made as indicated in the agreement letter issued by JCAR? Yes

13) Will this rule replace an Emergency Rule(s) currently in effect? No

14) Are there any amendments pending on this Part: No

15) Summary and Purpose of Rule(s): This amendment will allow patients on Methadone, who are eligible for Medicaid, to participate in out-patient treatment and have such treatment reimbursable through Medicaid up to the established limit. This amendment will not allow reimbursement for individual or group counseling and would not provide coverage for the actual cost or dispensing of the Methadone. Several changes are also made in order to make Part 2090 consistent with the provisions contained in Part 2060, the new substance abuse treatment and intervention licensing rule, which was adopted October 3, 1996. These amendments relate to the manner in which Level II care can be delivered on a daily basis and the group size reimbursement limitations.

DEPARTMENT OF HUMAN SERVICES

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16) Information and answers to questions regarding this adopted rule shall be directed to:

Ms. Susan Weir, Bureau Chief
Bureau of Administrative Rules and Procedures
Department of Human Services
100 South Grand Avenue East
3rd Floor, Harris Bldg.
Springfield, IL 62762
(217) 785-9772
TTY: (217) 557-1547

The full text of Adopted Rule(s) begins on the next page:

DEPARTMENT OF HUMAN SERVICES

NOTICE OF ADOPTED AMENDMENTS

TITLE 77: PUBLIC HEALTH
CHAPTER X: DEPARTMENT OF HUMAN SERVICES
SUBCHAPTER g: MEDICAID PROGRAM STANDARDS

PART 2090
SUBACUTE ALCOHOLISM AND SUBSTANCE ABUSE TREATMENT SERVICES

Section
2090.10 Purpose
2090.20 Definitions
2090.30 Medicaid Certification/Enrollment/Recertification
2090.35 General Requirements
2090.40 Reimbursable Services
2090.50 Quality Improvement
2090.60 Client Records
2090.70 Rate Setting
2090.80 Rate Appeals
2090.90 Inspections
2090.100 Sanctions for Non-Compliance/Audits
2090.105 Inspections (Renumbered)
2090.110 Sanctions for Non-Compliance/Audits (Renumbered)

AUTHORITY: Implementing and authorized by Section 5-10 of the Alcoholism and Other Drug Abuse and Dependency Act [20 ILCS 301/5-10].

SOURCE: Adopted at 11 Ill. Reg. 2236, effective January 14, 1987; emergency amendments at 12 Ill. Reg. 11273, effective June 30, 1988, for a maximum of 150 days; amended at 12 Ill. Reg. 20061, effective November 26, 1988; emergency amendments at 15 Ill. Reg. 10222, effective June 25, 1991, for a maximum of 150 days; amended at 15 Ill. Reg. 16662, effective November 1, 1991; amended at 16 Ill. Reg. 11807, effective July 14, 1992; amended at 18 Ill. Reg. 14223, effective September 2, 1994; amended at 19 Ill. Reg. 9411, effective July 1, 1995; amended at 19 Ill. Reg. 10454, effective July 1, 1995; emergency amendment at 20 Ill. Reg. 12489, effective August 30, 1996, for a maximum of 150 days; amended at 21 Ill. Reg. 1600, effective January 27, 1997; recodified from the Department of Alcoholism and Substance Abuse to the Department of Human Services at 21 Ill. Reg. 9319; emergency amendment at 21 Ill. Reg. 14087, effective October 9, 1997, for a maximum of 150 days; amended at 22 Ill. Reg. 5895, effective MAR 13 1998.

Section 2090.20 Definitions

The following definitions shall apply to this Part:

"Adolescent": A person who is at least twelve years of age and under eighteen years of age.

"Benefit Year": The State fiscal year.

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"Client": Any person who is eligible to receive services under one of the following categories: Aged, Blind, and Disabled (AABD); Temporary Assistance for Needy Families (TANF) ~~Aid-to--Families--with--Dependent Children---(APDC)~~; Medical Assistance, No Grant (MANG); Refugee Repatriate Program (RRP); Title XIX eligible Department of Children and Family Services (DCFS) wards; and persons under the age of eighteen who would qualify for TANF ~~APDC~~ but do not qualify as dependent children pursuant to 89 Ill. Adm. Code 140.7.

"Department": The Illinois Department of Human Services ~~Alcoholism and Substance Abuse~~.

~~"Drug-free-treatment":--Treatment-service-which-does-not--include--the use--of--methadone,-levo-alphacetylmethadol-(LAAM)-or-other-drugs-used for-substance-abuse-treatment.~~

"Follow-up": A scheduled provider contact with a former client that occurs after the client has been discharged, has been previously specified in the client's treatment and continuing care plan, and occurs for a period of time and at specified intervals. Follow-up is for the purpose of offering the discharged client continuing assistance as necessary to maintain and improve upon the clinical goals achieved during treatment.

"Physician": A person who is licensed to practice medicine in all its branches under the Medical Practice Act of 1987 [225 ILCS 60].

"Professional Staff": Any person who provides clinical services as defined in 77 Ill. Adm. Code 2060 and who meets the requirements for professional staff as specified in 77 Ill. Adm. Code 2060.309. Professional staff may also be a person determined to be appropriate to deliver the clinical services provided, in accordance with 77 Ill. Adm. Code 250, Subpart W.

"Provider": Any public or private agency, organization, or institution, or unit of State or local government or other legal entity licensed to deliver alcoholism or other drug abuse services according to the requirements specified in 77 Ill. Adm. Code 2060 and enrolled to provide treatment services under the Illinois Medical Assistance Program.

"Psychiatrist": A person licensed to practice medicine in all its branches under the Medical Practice Act of 1987 [225 ILCS 60] and who meets the requirements of Section 1-121 of the Mental Health and Developmental Disabilities Code [405 ILCS 5/1-121].

"Subacute": The level of care necessary to effectively treat an alcohol and/or other drug abuser's dependency on a chemical without

the more intensive measures designed to treat primary medical conditions in an acute care setting (e.g., inpatient hospitalization). Subacute care may be delivered in a facility licensed under the rules for Alcoholism and Substance Abuse Treatment and Intervention Licenses (77 Ill. Adm. Code 2060) or in a hospital, either of which is certified according to Section 2090.30 for purposes of Medicaid reimbursed alcoholism and/or other drug abuse services.

"Treatment Plan": An individually written plan for a client which identifies the treatment goals and objectives based upon a clinical assessment of the client's individual problems, needs, strengths and weaknesses.

"Under the direction of a physician": Treatment services provided under the direct supervision of a physician who is on staff and continuously directs the provision of care.

(Source: Amended at 22 Ill. Reg. 5895, effective MAR 13 1998)

Section 2090.35 General Requirements

a) To be reimbursable, treatment services shall be provided in compliance with all provisions specified in 77 Ill. Adm. Code 2060. Specifically, physician and professional staff involvement in treatment services shall be in compliance with 77 Ill. Adm. Code 2060.417, 2060.419, 2060.421, 2060.423 and 2060.425.

b) The provider shall submit Medicaid claims on a timely basis. Claims shall be submitted as soon after the service date as is reasonable unless there is good cause for later submission. In any event, if a clean claim for a service provided within a State fiscal year is not submitted to the State on a timely enough basis to be paid within the State Fiscal Year lapse period, the provider must pursue reimbursement through the Court of Claims. Claims submitted later than 12 months from the date of service shall not be reimbursed by the State. The provider shall only bill for services which are reimbursable.

c) Information Collection

1) The provider shall report, on a monthly basis, demographic and service system data using the Department's Automated Reporting and Tracking System (DARTS). The data collected shall be for the purpose of assessing individual client performance and for planning for future service development. Information to be reported by the provider, for each individual served by a program certified under Section 2090.90 of this Part, shall include but is not limited to the following:

A) Name, date of birth, gender, race and national origin, family size, income level, marital status, residential address, employment, education and referral source.

B) Special population designation, such as Medicaid eligible clients, women with dependent children, intravenous drug users (IVDUs), DCFS clients, DHS ~~DMHDD~~ clients, and criminal justice clients.

C) Drug/alcohol problem areas treated, characterized by drugs of use, frequency of use, and medical diagnosis.

D) Closing date information, such as the reason for discharging the client from the program.

2) The Department shall supply providers with DARTS software.

3) Disclosure of information contained within DARTS is governed by the specific provisions of federal regulations under Confidentiality of Alcohol and Drug Abuse Patient Records (42 CFR 2 (1997)~~(1987)~~).

d) The reimbursement limits herein shall not be applied in situations where to do so would deny an eligible individual under age 21 from receiving "early and periodic screening, diagnostic and treatment services" (ESPSDT) as defined in 42 USC 1396d(r). Services as set forth in this Part shall be reimbursable to an eligible individual under age 21 for as long as the services are clinically necessary pursuant to review which is consistent with subsection (a) of this Section.

e) The reimbursement limits herein shall not be applied where to do so would deny services to a pregnant woman that have been determined to be clinically necessary pursuant to review which is consistent with subsection (a). This exemption from the limits exists during the pregnancy and through the end of the month in which the 60-day period following termination of the pregnancy ends (post partum period), or until the services are no longer clinically necessary, whichever comes first. This exemption shall not apply to a woman who enters treatment services after delivery.

(Source: Amended at 22 Ill. Reg. 5895, effective MAR 13 1998)

Section 2090.40 Reimbursable Services

a) Level I: (formerly Outpatient Services)

1) Definition
The provision of treatment services as defined in 77 Ill. Adm. Code 2060.401(b).

2) Reimbursement
Level I ~~drug-free~~ treatment services delivered to clients are Medicaid-reimbursable via the prospective rates in effect as of the date of service (89 Ill. Adm. Code 148.370). Medicaid claims are submitted to the Department and shall meet the requirements of IDPA rules for alcoholism and substance abuse treatment programs (89 Ill. Adm. Code 148.340 through 148.370). The billable outpatient unit of service is a client hour defined as

face-to-face counseling with a diagnosed client in an individual, group, or family setting. Reimbursement shall occur by a fee-for-service mechanism, using one client hour as the base unit of service, billable to the nearest quarter-hour. No more than 25 hours may be reimbursed for an eligible adult client per benefit year.

b) Level II: (formerly Intensive Outpatient Services)

1) Definition

The provision of treatment services as defined in 77 Ill. Adm. Code 2060.401(c).

2) Reimbursement

Level II drug-free treatment services delivered to clients are Medicaid reimbursable via the prospective rates in effect as of the date of service (89 Ill. Adm. Code 148.370). Drug-free treatment as referenced herein is that which does not include the use of Methadone or levo-alphacetylmethadol (LAAM). Medicaid claims are submitted to the Department, and shall meet the requirements of IDPA rules or alcoholism and substance abuse programs (89 Ill. Adm. Code 148.340 through 148.370). Reimbursement shall occur by a fee-for-service mechanism, using one client hour as the ~~session of a minimum of three hours as the~~ base unit of service billable to the nearest hour. Services for clients enrolled in Level II (intensive outpatient) treatment shall not be reimbursed under the provisions for Level I (outpatient) services. No more than 75 hours shall be reimbursed for an eligible adult client per benefit year.

c) Level III: (formerly Inpatient/Residential Services)

1) Definition-Adolescent Residential Rehabilitation

The provision of treatment services as defined in 77 Ill. Adm. Code 2060.401(d). Such treatment shall be drug-free for adolescents on a scheduled-only residential basis in a Medicaid enrolled hospital subacute setting, or to adolescents in a psychiatric facility or an inpatient program in a psychiatric facility, either of which is accredited by the Joint Commission on Accreditation of Health Care Organizations (JCAHO), One Renaissance Boulevard, Oakbrook Terrace, Illinois 60181. Drug-free treatment as referenced herein is that which does not include the use of Methadone or levo-alphacetylmethadol (LAAM). This service is designed to reduce or eliminate an adolescent's intake of alcohol and/or other drugs.

Adolescent residential rehabilitation must be delivered in accordance with an adolescent's individualized treatment plan recommended by a physician if in a hospital setting, and under the direction of a physician if in a psychiatric facility.

2) Reimbursement

Adolescent residential rehabilitation treatment services delivered to clients are medicaid reimbursable via the prospective rates in effect as of the date of service (89 Ill. Adm. Code 148.370). Medicaid claims are submitted to the Department and shall meet the requirements of IDPA rules for alcoholism and substance abuse treatment programs (89 Ill. Adm. Code 148.340 through 148.370). Reimbursement shall occur on a per diem basis. Services in an adolescent residential rehabilitation program with over 16 beds shall not be reimbursed under the provisions for Level I (outpatient) or Level II (intensive outpatient) services.

3) Definition-Day Treatment

The provision of treatment services as defined in 77 Ill. Adm. Code 2060.401(d). Drug-free treatment services on a scheduled-only residential basis by a program licensed pursuant to 77 Ill. Adm. Code 2060 and certified as having 16 beds or fewer as specified in Section 2090.30 of this Part and excluding room and board, meals, night supervision of dormitory areas and other domiciliary support services. Drug-free treatment as referenced herein is that which does not include the use of Methadone or levo-alphacetylmethadol (LAAM). Treatment services may be provided to adults and adolescents.

Day treatment services shall be reimbursed at an all-inclusive per diem rate as set forth in Section 2090.70(c)(4), available upon certification of the facility. No more than 30 days shall be reimbursed for an eligible adult client.

d) Ancillary Psychiatric Diagnostic Services

1) Ancillary psychiatric diagnostic services are limited psychiatric evaluations to determine whether the client's primary condition is attributable to the effects of alcohol or drugs or to a diagnosed psychiatric or psychological disorder. Such an evaluation shall determine the client's primary condition and recommend appropriate treatment services.

2) Reimbursable psychiatric evaluations are limited to a psychiatric evaluation/examination of a client and the exchange of information with the primary physician and other informants such as nurses, counseling staff, or family members and the preparation of a report including psychiatric history, mental status, and diagnosis. This service shall be performed by a psychiatrist.

3) Reimbursable psychiatric evaluations may be delivered to clients admitted to Levels I, II and III care (adolescent residential rehabilitation or day treatment) where the need for such services is documented in the client's individualized treatment plan. Documentation of all such services shall be maintained in the client record.

4) Ancillary diagnostic services delivered to clients are Medicaid-reimbursable on a per-encounter basis at the practitioner's usual and customary charge, not to exceed the prevailing rate as established by IDPA pursuant to 89 Ill. Adm. Code 140.400.

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NOTICE OF ADOPTED AMENDMENTS

(Source: Amended at 22 Ill. Reg. 5895, effective MAR 13 1998)

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1) Heading of the Part: Use of X-Rays in the Healing Arts Including Medical, Dental, Podiatry, and Veterinary Medicine

2) Code Citation: 32 Ill. Adm. Code 360

3)

Section Number:	Adopted Action:
360.10	Amendment
360.20	Amendment
360.30	Amendment
360.40	Amendment
360.50	Amendment
360.60	Amendment
360.71	Amendment
360.75	Amendment
360.90	Amendment
360.100	Amendment
360.110	Amendment
360.120	Amendment
APPENDIX A	Amendment
APPENDIX B	Amendment
APPENDIX C	Amendment
APPENDIX D	Amendment
TABLE A	Amendment
TABLE B	Amendment

4) Statutory Authority: Implementing and authorized by the Radiation Protection Act of 1990 [420 ILCS 40].

5) Effective Date of Amendments: March 13, 1998

6) Does this rulemaking contain an automatic repeal date? No

7) Does these amendments contain incorporations by reference? Yes

8) Date filed in Agency's Principal Office: March 6, 1998

9) Notice of Proposal Published in the Illinois Register:

November 7, 1997 (21 Ill. Reg. 14423)

10) Has JCAR issued a Statement of Objections to these Amendments? No

11) Differences between proposal and final version: The following changes were made in response to comments and suggestions of the Joint Committee on Administrative Rules:

a) In Section 360.20, in the Definition of "Source - Skin", strike the hyphen and add "to".

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b) In Section 360.71(e)(3), after the Agency Note, add:

"AGENCY NOTE: A copy of this report is available for public inspection at the Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, Illinois 62704. Copies of this report may also be obtained from the American College of Radiology, 1891 Preston White Drive, Reston, VA 22091."

c) In Section 360.71(j)(5), strike the Agency Note.

12) Have all the changes agreed upon by the agency and JCAR been made as indicated in the agreement letter issued by JCAR? The Department has made all the changes to which it agreed with the Joint Committee.

13) Will these amendments replace an emergency amendment currently in effect? No

14) Are there any amendments pending on this Part? No

15) Summary and Purpose of Amendments: This Amendment will: (1) clarify the experience requirements for a "diagnostic imaging specialist"; (2) add a new subsection in Section 360.30 which would require registrants to verify that individuals who are required to be accredited by 32 Ill. Adm. Code 401 to perform medical radiography actually are properly accredited with the Department; (3) clarify and update terminology in this Part; (4) add provisions in Sections 360.50 and 360.90 to allow the use of distance to limit radiation doses; (5) reorganize the provisions of Section 360.60 for clarity and delete the requirement for numeric indicators; (6) add requirements in Section 360.71 to implement a legislative mandate relating to the distribution of mammography pamphlets; (7) delete the reference to Section 360.60(a)(1) in Section 360.100(a)(3)(A) which will allow veterinarians to use a non-independent stepless adjustable collimator; (8) correct the phrase "qualified nondepartment inspector" to reflect the statutory language of "nondepartment qualified inspector" everywhere it appears in the rule; (9) change the breast and phantom thicknesses throughout the rule from 4.5 to 4.2 to meet the revised standards of the American College of Radiology; (10) update incorporations by reference to the latest editions; and (11) change references throughout the rule to meet the format requirements of the Joint Committee on Administrative Rules.

16) Information and questions regarding these amendments shall be directed to:

Lyle J. Black
Senior Staff Attorney
Department of Nuclear Safety
1035 Outer Park Drive
Springfield, Illinois 62704

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The full text of the Adopted Amendments begins on the next page:

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TITLE 32: ENERGY
CHAPTER II: DEPARTMENT OF NUCLEAR SAFETY
SUBCHAPTER b: RADIATION PROTECTION

PART 360
USE OF X-RAYS IN THE HEALING ARTS INCLUDING MEDICAL, DENTAL, PODIATRY, AND VETERINARY MEDICINE

Section

AUTHORITY: Implementing and authorized by the Radiation Protection Act of 1990 [420 ILCS 40].

SOURCE: Filed April 20, 1974 by the Department of Public Health; old rules repealed, new rules adopted at 4 Ill. Reg. 25, p. 157, effective July 1, 1980; transferred to the Department of Nuclear Safety by P.A. 81-1516, effective December 3, 1980; codified at 7 Ill. Reg. 16406; amended at 10 Ill. Reg. 13271, effective July 28, 1986; amended at 13 Ill. Reg. 803, effective April 1, 1989; amended at 15 Ill. Reg. 6180, effective April 16, 1991; amended at 17 Ill. Reg. 17972, effective October 15, 1993; amended at 18 Ill. Reg. 11524, effective

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July 11, 1994; emergency amendment adopted at 19 Ill. Reg. 278, effective December 30, 1994, for a maximum of 150 days; emergency expired May 30, 1995; amended at 19 Ill. Reg. 8284, effective June 12, 1995; amended at 22 Ill. Reg. 5904, effective MAR 13 1998.

NOTE: In this Part, superscript numbers or letters are denoted by parentheses; subscript are denoted by brackets.

Section 360.10 Scope

a) This Part establishes requirements for use of x-ray producing devices in the healing arts by a practitioner licensed to practice a treatment of human ailments by virtue of the Medical Practice Act of 1987 ~~(Ill. Rev. Stat. 1991, ch. 111, pars. 4401 et seq.)~~ [225 ILCS 60], the Illinois Dental Practice Act ~~(Ill. Rev. Stat. 1991, ch. 111, pars. 2301 et seq.)~~ [225 ILCS 25], or the Podiatric Medical Practice Act of 1987 ~~(Ill. Rev. Stat. 1991, ch. 111, pars. 4001 et seq.)~~ [225 ILCS 100], or by a medical radiographer or radiation therapist accredited in accordance with the provisions of 32 Ill. Adm. Code 401.100 or an individual exempt from the provisions of 32 Ill. Adm. Code 401, by Section 401.30 of that Part, acting under the supervision, prescription or direction of such licensed person or the non-human use of x-ray by veterinarians by virtue of the Veterinary Medicine and Surgery Practice Act of 1983 ~~(Ill. Rev. Stat. 1991, ch. 111, pars. 7001 et seq.)~~ [225 ILCS 115]. The provisions of this Part are in addition to, and not in substitution for, other applicable provisions of 32 Ill. Adm. Code 310, 320, 340, 400 and 410.

b) It is recognized that some installations and equipment designed before the adoption of this Part, coupled with conditions of use, may be adequate to achieve minimum doses. Request for exemption from some provisions of this Part will be considered in accordance with 32 Ill. Adm. Code 310.30(a).

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 13 1998)

Section 360.20 Definitions

As used in this Part, the following definitions apply:

"Accelerator" (also "particle accelerator") means any therapeutic machine capable of producing a useful beam of x-rays or charged particles with energies of 1 MeV or greater. Accelerators include cyclotrons, betatrons and linear accelerators.

"Accelerator facility" means the location at which one or more particle accelerators are installed and are operated under the same administrative control.

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"Aluminum equivalent" means the thickness of type 1100 aluminum alloy affording the same attenuation, under specified conditions, as the material in question. The nominal chemical composition of type 1100 aluminum alloy is 99.00 percent minimum aluminum, 0.12 percent copper.

"Applicator" means a structure which determines the extent of the treatment field at a given distance from the source of the beam.

"Attenuation block" means a block or stack, having dimensions 20 centimeters by 20 centimeters by 3.8 centimeters, of aluminum equivalent. Copper may be substituted for aluminum if an appropriate thickness is used for the kVp selected, as indicated below:

kVp	Millimeters of Copper Equivalent to 3.8 centimeters of aluminum
99 or less	2.0
100 to 125	2.5
greater than 125	3.0

"Automatic exposure control" means a device which automatically controls one or more technique factors in order to obtain at a preselected location(s) a required quantity of radiation (see "Phototimer").

"Barrier" (see "Protective barrier").

"Beam" means a flow of electromagnetic or particulate radiation which passes through the opening in the beam limiting device and which is used for diagnosis or treatment.

"Beam axis" (see "Central axis of the beam").

"Beam-limiting device" means a device which provides a means to restrict the dimensions of the x-ray field (see "Collimator", "Diaphragm" and "Shutter").

"Beam monitoring system" means a system of devices that will monitor the useful beam during irradiation and will terminate irradiation when a preselected number of monitor units has been accumulated.

"Beam scattering filter" means a filter placed in an electron beam in order to scatter the beam and provide a more uniform distribution of electrons in the beam.

"Central axis of the beam" means the line passing through the source of the beam and the center of the plane formed by the edge of the first beam-limiting device.

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"Charged particle beam" (see "Beam").

"Coefficient of variation" means the ratio of the standard deviation to the mean value of a population of observations.

"Collimator" means a device or mechanism by which the x-ray beam is restricted in size (see "Beam-limiting device").

"Computed tomography (CT)" means the production of a tomogram by the acquisition and computer processing of x-ray transmission data.

"Computed tomography dose index (CTDI)" means the integral of the dose profile along a line perpendicular to the tomographic plane divided by the product of the nominal tomographic section thickness and the number of tomograms produced in a single scan.

"Contact therapy system" means an x-ray system used for therapy which is designed for very short treatment distances (5 centimeters or less), usually employing peak tube potentials in the range of 20 to 50 kVp.

"Control panel" means that part or parts of the x-ray system upon which are mounted the switches, knobs, pushbuttons and other hardware necessary for setting the technique factors prior to initiating an x-ray exposure.

"CT gantry" means the tube housing assemblies, beam-limiting devices, detectors and the supporting structures and frames which hold these components.

"Dead-man switch" means a switch constructed so that a circuit-closing contact can be maintained only by continuous pressure on the switch by the operator.

"Densitometer" means a device which is used to provide a quantitative measurement of the optical density of x-ray film to determine the response of the film to exposure and development.

"Diagnostic imaging specialist" means a person who possesses the knowledge, training and experience to apply the principles of radiological physics to diagnostic x-ray applications. A diagnostic imaging specialist shall meet one of the two criteria below:

Be certified by the American Board of Radiology, the American Board of Medical Physics or the Canadian College of Medical Physics in:

Diagnostic radiological physics; or

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Radiological physics.

Be approved by the Department as a ~~qualified~~ nondepartment qualified inspector pursuant to the provisions of 32 Ill. Adm. Code 410.30, and:

Have 3 years of experience performing radiation measurements and quality assurance duties in mammography and/or computed tomography ~~for diagnostic imaging facilities~~; or

Have 2 years of experience performing radiation measurements and quality assurance duties in mammography and/or computed tomography and have undertaken a training program of at least 40 hours that ~~,--conducted--by--a--diagnostic--imaging specialist,---and--which~~ includes instruction in quality assurance procedures and the requirements of this Part.

To qualify as a diagnostic imaging specialist in mammography and/or computed tomography, the nondepartment qualified inspector's experience shall have been obtained in the same field for which approval is sought.

~~AGENCY--NOTE:--A--person--performing--physics--duties--for-a diagnostic-facility-should-have-experience-in-the-same-field for-which--the--duties--are--performed.----For--example,--an individual---providing--support--to--mammography--facilities should-have--3--years--of--mammography--experience.---It--is recognized--that--3--years-of-experience-for-various-imaging modalities-could-be-gained-concurrently.~~

"Diagnostic source assembly" means an x-ray tube housing assembly, designed for use in diagnostic x-ray applications, with a beam-limiting device attached.

"Diaphragm" means a device or mechanism by which the x-ray beam is restricted in size (see "Beam-limiting device").

"Field flattening filter" means a filter used to provide dose uniformity over the area of a useful beam of x-rays at a specified depth.

"Filter" means material placed in the useful beam to absorb, preferentially, radiations based on energy level or to modify the spatial distribution of the beam.

"Gantry" means that part of the system supporting and allowing possible movements of the radiation head.

"General purpose x-ray system" means any radiographic x-ray system

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which, by design, is not limited to radiographic examination of specific anatomical regions.

"Gonad shield" means a protective device for the testes or ovaries which provides a minimum of 0.5 millimeter lead equivalent protection.

"Half-value layer (HVL)" means the thickness of a specified material that attenuates the beam of radiation to an extent such that the exposure rate is reduced to one-half of its original value.
AGENCY NOTE: The contribution of all scattered radiation, other than any that might be present initially in the beam concerned, should be minimized.

"Healing arts screening" means the examination of human beings using x-ray machines for the detection or evaluation of potential diseases when such examinations are not specifically ordered by a licensed practitioner of the healing arts legally authorized to prescribe such x-ray examinations for the purpose of diagnosis or treatment. However, healing arts screening does not include mammography on self-referred patients.

"Image intensifier" means a device, installed in a housing, which converts an x-ray pattern into a corresponding light image, usually by electronic means.

"Image receptor" means any device, such as a fluorescent screen or radiographic film, which transforms incident x-ray photons either into a visible image or into another form which can be made into a visible image by further transformations.

"Interlock" means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur.

"Isocenter" means a fixed point in space located at the center of the smallest sphere through which the central axis of the useful beam passes at any beam orientation.

"Kilovolts peak (kVp)" means the crest value, in kilovolts, of the electric potential applied to the x-ray tube between the cathode and anode of a pulsating electric potential generator.

"Lead equivalent" means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.

"Leakage radiation" means all radiation emanating from the diagnostic source assembly except for:

The useful beam; and

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The radiation produced when the exposure switch or timer is not activated.

"Leakage technique factors" means the technique factors used to measure leakage radiation from the diagnostic source assembly. They are defined as follows:

For capacitor energy storage equipment, the maximum-rated peak tube potential and the maximum-rated number of exposures in 1 hour for operation at the maximum-rated peak tube potential with the quantity of charge per exposure being 10 millicoulombs, i.e. 10 milliampere-seconds, or the minimum obtainable from the unit, whichever is larger.

For field emission equipment rated for pulsed operation, the maximum-rated peak tube potential and the maximum-rated number of x-ray pulses in 1 hour for operation at the maximum-rated peak tube potential.

For all other equipment, the maximum-rated peak tube potential and the maximum-rated continuous tube current for the maximum-rated peak tube potential.

"Light field" means that area of the intersection of the light beam from the beam-limiting device and any one of the sets of planes parallel to and including the plane of the image receptor. The edge of the light field is defined as the locus of points at which the illumination is 25 percent of that at the center of the light field.

"Mammography" means radiography of the breast for the purpose of enabling a physician to determine the presence, size, location and extent of cancerous or potentially cancerous tissue in the breast.

"Mammography phantom" means a phantom specifically designed for image quality evaluation of mammography systems and which may also be used in the process of determining the mean glandular breast dose. It shall be any phantom material that is equivalent to a nominal 4.2~~4.5~~-centimeter compressed breast of average density (i.e., 50 percent adipose and 50 percent glandular tissue), and shall contain masses, specks and fibers as specified in Section 360.71(j)(2) of this Part.

"Mammography system ~~System~~" means an x-ray system that is used to perform mammography.

"Medical radiographer" means a person other than a licensed practitioner, accredited in accordance with the provisions of 32 Ill. Adm. Code 401, or an individual exempt from the provisions of 32 Ill. Adm. Code 401, who performs medical radiation procedures and applies

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x-radiation, to any part of the human body, for diagnostic purposes while under the supervision of a licensed practitioner.

"Mobile equipment" (see "X-ray equipment").

"Monitor unit" means a unit response from the beam monitoring system from which the absorbed dose can be calculated.

"Moving beam therapy" means radiation therapy in which there is displacement of the useful beam relative to the patient. Moving beam therapy includes arc therapy, skip therapy and rotational beam therapy.

"Multiple scan average dose (MSAD)" means the average dose at the center of a series of scans, specified at the center of the axis of rotation of a computed tomography system.

"Operator" means an individual who applies ionizing radiation for diagnostic or therapeutic purposes.

"Phototimer" means a method for controlling radiation exposures to image receptors by the amount of radiation which reaches a radiation monitoring device(s). The radiation monitoring device(s) is part of an electronic circuit which controls the duration of time the tube is activated (see "Automatic exposure control").

"Physicist" (see "Therapeutic radiological physicist").

"Portable equipment" (see "X-ray equipment").

"Position indicating device" means a device on intraoral dental x-ray equipment used to indicate the beam position and to establish a definite source-skin distance.

"Primary protective barrier" (see "Protective barrier").

"Protective apron" means an apron of radiation absorbing materials, at least 0.25 millimeter lead equivalent, used to reduce exposure from leakage and scatter radiation.

"Protective barrier" means a barrier of radiation absorbing material(s) used to reduce radiation dose. The types of protective barriers are as follows:

"Primary protective barrier" means the material, excluding filters, placed in the useful beam to reduce the radiation dose.

"Secondary protective barrier" means a barrier sufficient to

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attenuate the leakage and scatter radiation to the required degree.

"Protective glove" means a glove made of radiation absorbing materials, at least 0.25 millimeter lead equivalent, used to reduce dose from leakage and scatter radiation.

"Radiation beam" (see "Beam").

"Radiation therapy simulation system" means a radiographic/fluoroscopic x-ray system used exclusively for localizing the volume to be exposed during radiation therapy and confirming the position and size of thehe therapeutic irradiation field.

"Radiologist" means a physician or veterinarian who is either:

Certified by the American Board of Radiology in diagnostic radiology or general radiology;

Certified by the American Osteopathic Board of Radiology;

Certified by the American Chiropractic Board of Radiology; ~~or~~

Certified by the American College of Veterinary Radiology; or

Eligible for certification by any College or Board identified above.

"Reference plane" means a plane which is displaced from and parallel to the tomographic plane.

"Scan" means the complete process of collecting x-ray transmission data for the production of a tomogram. Data can be collected simultaneously during a single scan for the production of one or more tomograms.

"Scan increment" means the amount of relative displacement of the patient support device with respect to the CT x-ray system between successive scans measured along the direction of such displacement.

"Scatter radiation" means radiation that, during passage through matter, has been deviated in direction.

"Secondary protective barrier" (see "Protective barrier").

"Sensitometer" means a device which is used to test the setup and stability of film processing procedures and equipment by providing a standard pattern of light exposure of x-ray film.

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"Shadow tray" means a device attached to the radiation head to support auxiliary beam-limiting material.

"Shutter" means an adjustable beam-limiting or attenuating device, usually made of lead, fixed to an x-ray tube housing to intercept or collimate the useful beam (see "Beam-limiting device").

"SID" means source-image receptor distance (see "Source-image receptor distance").

"Source" means the focal spot of the x-ray tube.

"Source-image receptor distance" means the distance from the source to the center of the input surface of the image receptor.

"Source to - skin distance (SSD)" means the distance measured along the central ray from the center of the front surface of the x-ray focal spot to the surface of the irradiated object.

"Special purpose x-ray system" means any radiographic x-ray system which, by design, is limited to radiographic examination of a specific anatomical region, or to the extremities collectively.

"Spot film" means a radiograph which is made during a fluoroscopic examination to permanently record conditions which exist during that fluoroscopic procedure.

"Stationary beam therapy" means radiation therapy in which there is no displacement of the useful beam relative to the patient during irradiation.

"Stationary equipment" (see "X-ray equipment").

"Technique factors" means the electrical potential (kilovolts), current (milliamperes), exposure time parameters (seconds or pulses) or a combination thereof, selectable at the control panel of an x-ray system (see "Control panel").

"Therapeutic radiological physicist ~~Radiological Physicist~~" means an individual who has the knowledge, training and experience to measure ionizing radiation, evaluate safety techniques, advise regarding radiation protection needs and apply the principles of radiological physics to clinical radiation therapy. To meet these criteria, a therapeutic radiological physicist shall:

Be certified by the American Board of Radiology, the American Board of Medical Physics or the Canadian College of Medical Physics in:

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Therapeutic radiological physics; or

Roentgen ray and gamma ray physics; or

X-ray and radium physics; or

Radiological physics; or

Hold a master's degree or doctorate in physics, biophysics, radiological physics or health physics and have completed 1 year of full-time training in radiological physics and also 1 year of full-time work experience under the supervision of a therapeutic radiological physicist at a medical institution. To meet this requirement, the individual shall have performed the tasks specified in Section ~~Sections~~ 360.120(c), (d) and (e) of this Part under the supervision of a therapeutic radiological physicist during the year of work experience.

"Tomogram" means the depiction of the x-ray attenuation properties of a section through the body.

"Tomographic plane" means that geometric plane which is identified as corresponding to the output tomogram.

"Tomographic section" means the volume of an object whose x-ray attenuation properties are imaged in a tomogram.

"Useful beam" (see "Beam").

"X-ray equipment" means an x-ray system, sub-system or component thereof. Types of x-ray equipment are as follows:

"Mobile x-ray equipment" means x-ray equipment mounted on a permanent base with wheels and/or casters for moving while completely assembled. Mobile x-ray equipment includes x-ray equipment permanently mounted in vehicles.

"Portable x-ray equipment" means x-ray equipment designed to be hand-carried.

"Stationary x-ray equipment" means x-ray equipment which is installed in a fixed location.

"X-ray field" means, for diagnostic purposes, that area of the intersection of the useful beam and any one of the set of planes parallel to and including the plane of the image receptor. The edge of the x-ray field is defined as the locus of points at which the exposure is 25 percent of that at the center of the x-ray field.

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"X-ray system" means an assemblage of components for the controlled production of x-rays. It includes minimally an x-ray high-voltage generator, an x-ray control panel, an x-ray tube housing assembly, a beam-limiting devices and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system. X-ray systems include diagnostic systems, therapeutic systems and accelerator systems.

(Source: Amended at 22 Ill. Reg. 5904; effective MAR 13 1998)

Section 360.30 General Requirements and Administrative Controls

The requirements in this Section apply to all uses of x-rays in veterinary medicine and to all uses of x-rays in the healing arts including the use of x-rays for both diagnostic and therapeutic purposes. Additional requirements for all diagnostic x-ray systems are in Section 360.40 of this Part and specific equipment application classes are contained in Sections 360.41 through 360.100 of this Part. For therapeutic x-ray systems also see Sections 360.110 and 360.120 of this Part.

a) Registrant. The registrant shall:
   1) Direct the operation of the x-ray system(s);
   2) Register with the Department, in accordance with the provisions of 32 Ill. Adm. Code 320, all x-ray equipment which is used at the facility and all portable or mobile x-ray equipment used by the registrant;
   3) Submit an application for inspection of radiation machines to the Department in accordance with 32 Ill. Adm. Code 410 and, if the inspection is performed by a ~~qualified~~ nondepartment qualified inspector, submit ~~a copy of~~ the radiation inspection report to the Department;
   4) Verify that each individual required to be accredited by 32 Ill. Adm. Code 401 to apply x-rays for either diagnostic or therapeutic purposes is properly accredited with the Department prior to allowing the individual to apply medical radiation procedures on human beings;
   5)~~4~~) Permit operation of the x-ray system(s) only by individuals who are licensed in accordance with State law (see Section 360.10(a) of this Part), or who are accredited by the Department pursuant to 32 Ill. Adm. Code 401 or who are exempt from such requirements in accordance with the provisions of 32 Ill. Adm. Code 401.

b) Shielding. Each installation shall be provided with such primary barriers and/or secondary barriers as are necessary to assure compliance with the provisions of 32 Ill. Adm. Code 340.210, 340.270, 340.280 and 340.310.

c) An x-ray system which does not meet the provisions of this Part shall not be operated for diagnostic or therapeutic purposes.

d) If an x-ray system is identified as not being in compliance with the

provisions of this Part and if that system is accessible for use, it shall be rendered inoperable (i.e. dismantle the x-ray source from the source support assembly) if so ordered by the Director.

e) Prohibitions
   1) Unauthorized Exposure. Individuals shall not be exposed to the useful beam except for healing arts purposes and only when such exposure has been authorized by a licensed practitioner of the healing arts. This provision specifically prohibits deliberate exposure for the following purposes:
      A) Exposure of individuals for training, demonstration or other non-healing arts purposes.
      B) Exposure of individuals for the purpose of "healing arts screening" (see Section 360.20 of this Part).
   2) Fluoroscopy shall not be used as a substitute for radiography or in lieu of proper anatomical positioning/centering procedures prior to radiographic studies.
   3) Fluoroscopic equipment using phosphorescent screens shall not be used. Image intensification shall be utilized on all fluoroscopic equipment.
   4) The use of direct exposure x-ray film (without intensifying screens) for routine diagnostic radiological imaging procedures, other than intraoral dental radiography and therapeutic portal imaging, is prohibited.
      AGENCY NOTE: Therapeutic portal imaging is a technique used in radiation therapy to verify correct alignment of therapy beams with the patient's anatomy.
   5) The use of photofluorographic systems is prohibited.
      AGENCY NOTE: Photofluorography is frequently called mass miniature radiography. In this technique the image of a fluorescent screen is recorded on film by means of a camera.

f) Individual Monitoring and Reporting Requirements. All persons who are associated with the operation of an x-ray system are subject to the radiation dose standards, requirements for the determination of the doses, requirements for individual monitoring and requirements for reporting of radiation doses which are contained in 32 Ill. Adm. Code 340.

g) The registrant shall comply with the requirements of the Department's rules entitled, Notices, Instructions and Reports to Workers; Inspections, 32 Ill. Adm. Code 400.

h) Records and Associated Information. The registrant shall maintain at the facility, for a period of at least one inspection cycle (see 32 Ill. Adm. Code 410.60(d)), records showing the receipt, transfer, storage and disposal of all sources of radiation in accordance with the provisions of 32 Ill. Adm. Code 310 and 320.

i) Staff Qualifications. The registrant shall maintain at the facility, for review by the Department, current certificates of accreditation (clear, legible copies are acceptable), issued by the Department in accordance with the provisions of 32 Ill. Adm. Code 401, for all individuals who are required to be so accredited.

j) Radiation Safety Procedures. The registrant shall provide to each individual who operates x-ray equipment at the facility written operating and safety procedures. These procedures shall include restrictions required for the safe operation of each radiation machine and shall include the topics listed in the radiation safety program of subsection (k) of this Section ~~below~~.

k) Radiation Safety Program. The registrant shall provide for initial and annual in-service training in radiation safety for individuals (excluding licensed practitioners) that apply ionizing radiation at the facility, to ensure their awareness of the registrant's radiation safety practices and policies. The in-service training shall include the following topics:
   1) Operating and emergency procedures for the radiation machine(s);
   2) Use of personnel and patient protective devices;
   3) Procedures to minimize patient and occupational doses, including procedures for selecting personnel to support patients or film, as required by Section 360.40 of this Part;
   4) Use of individual monitoring devices (if such devices are used at the facility);
   5) Film processing procedures; and
   6) Prohibited uses of x-ray machines, as described in subsection (e) of this Section~~, above~~.

l) Operator Training. Individuals who operate radiation machines shall be instructed in and able to demonstrate competence with the registrant's operating and safety procedures.

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 19 1998)

Section 360.40 General Equipment and Operation Requirements for Diagnostic X-Ray Systems

The requirements of this Section apply to all diagnostic x-ray systems. Additional requirements for specific equipment application classes are in Sections 360.41 through 360.100 of this Part.

a) Half-Value Layer
   1) The half-value layer of the useful beam for a given x-ray tube potential shall not be less than the values shown in Section 360. Table B of this Part.
   2) For capacitor energy storage equipment, compliance with the requirements of this subsection (a) shall be determined with the system fully charged and a setting of 10 mAs for each exposure ~~maximum--quantity-of-charge-per-exposure;--This-will-be-deemed-to have-been-met-if-an-mAs-of-10-or-greater-has-been-used~~.

b) Beam-On Indicators
   1) The control panel shall include a device (usually a milliammeter or labeled indicator lamp) which will give positive indication of

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the production of x-rays whenever the x-ray tube is energized.

2) Where two or more radiographic tubes are controlled by one exposure switch, the tube or tubes which have been selected shall be clearly indicated prior to initiation of the exposure. This indication shall be both on the x-ray control panel and at or near the tube housing assembly which has been selected.

c) Mechanical Support of Tube Head. The tube housing assembly supports shall be adjusted such that the tube housing assembly will remain stable during an exposure unless tube housing movement is a designed function of the x-ray system. The tube housing assembly supports shall not be hand-held unless the manufacturer has specifically designed the system to be operated while hand-held.

d) Diagnostic Source Assembly Leakage Radiation Limits. The leakage radiation measured at a distance of 1 meter from the source shall not exceed 25.8 microC/kg(100mR) in 1 hour when the tube is operated at its leakage technique factors.

e) Radiation From Capacitor Energy Storage X-ray Equipment in Standby Status. Radiation emitted from the x-ray tube when the exposure switch or timer is not activated shall not exceed a rate of 0.516 microC/kg (2mR) per hour at 5 centimeters from any accessible surface of the diagnostic source assembly, with the beam-limiting device fully open.

f) Technique Indicators

1) The technique factors to be used during an exposure shall be indicated at the control panel before the exposure begins. If automatic exposure controls are used, the technique factors which are set prior to the exposure shall be indicated at the control panel.

2) The requirement of subsection (f)(1) of this Section ~~above~~ may be met by permanent markings on equipment having fixed technique factors. Indication of technique factors shall be visible from the operator's position except in the case of spot films.

3) The indicated technique factors of exposure time and kilovolts peak (kVp) shall correspond to the actual exposure factors within ten percent of the indicated ~~measured~~ values.

g) Reproducibility of Exposures

1) For any specific combination of selected technique factors utilized, the coefficient of variation of radiation exposures shall not exceed 0.05 for any specific combination of selected technique factors. ~~It will not be necessary to calculate the coefficient of variation if for four consecutive measurements the value of the average exposure (Eavg) is greater than or equal to ten times the maximum exposure (Emax) minus the minimum exposure (Emin). This requirement is mathematically represented by the following:~~

~~Eavg $\geq$ 10(-Emax---Emin)~~

AGENCY NOTE: It will not be necessary to calculate the coefficient of variation if for the first four measurements the value of the average exposure (Eavg) is greater than or equal to ten times the maximum exposure (Emax) minus the minimum exposure (Emin). This requirement is mathematically represented by the following:

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$$Eavg \geq 10 (Emax - Emin)$$

2) For systems using automatic exposure control (AEC) (i.e., systems employing photo-multiplier tubes, or ionization chambers to terminate the x-ray exposure), compliance measurements shall be performed with the system operating in the AEC mode. Attenuating material shall be placed in the beam to provide exposure times in the range of those used clinically.

AGENCY NOTE: The intent of this subsection (g) is to require testing of the system in a manner that is clinically relevant. Reproducibility of exposures should be measured at technique factors that are commonly used and are subject to variation. For AEC systems, commonly used settings in combination with an appropriate thickness of attenuating material should be used to provide exposure times in the clinical range.

h) Patient or Film Support

1) When a patient or film must be provided with auxiliary support during a radiation exposure:

A) No person shall be used routinely to hold film or patients; and

B) Unless the procedure precludes their use, mechanical holding devices shall be used to restrain patients. For example, mechanical holding devices could not be used if the devices would preclude clear visualization of the tissue being examined.

2) When a patient or film must be held by an individual, written safety procedures, as required by Section 360.30(j) of this Part, shall indicate the criteria for selecting a holder and the procedure the holder shall follow.

AGENCY NOTE: The radiation dose received by radiation workers, patients and the general public can be reduced if mechanical patient and film support devices are used for radiographic and fluoroscopic procedures. In the event that an individual must be used in lieu of mechanical patient or film support devices to hold patients or films, every effort should be made to limit the individual's radiation dose. This can be accomplished by not assigning to a single individual the task of supporting patients and films during radiographic and fluoroscopic examinations. Rather, a number of individuals may be rotated through the assignment, thereby reducing the radiation dose to one individual.

i) Personnel Protection

1) Except for patients who cannot be moved out of the room, only the individuals required for the medical procedure or training shall be in the room during the radiographic/flouroscopic exposure.
2) Individuals who must be in the room with the patient being radiographed or fluoroscoped shall be protected by 0.25 millimeter lead equivalent apparel or device or shall be positioned at a distance such that the individual does not receive a radiation dose in excess of the limits specified in 32 Ill. Adm. Code 340.310.

j) Technique Guides
1) In the vicinity of each radiographic x-ray system's control panel, a technique guide shall be provided which specifies for routine examinations performed with that system, the following information:
A) Patient's anatomical size versus technique factors to be utilized;
B) Type of ~~and-size-of--the--film--or~~ screen-film combination utilized, if more than one ~~to-be-used~~; and
C) SID to be used.
2) For automatic exposure control (AEC) systems ~~(i.e.,-systems employing--photo-multiplier--tubes--or--ionization--chambers---to terminate--the-x-ray-exposure)~~ with selectable exposure detectors and density settings, the technique guide shall also specify the appropriate exposure detector(s) and density setting to be utilized for each radiographic examination listed.
3) For AEC systems, if operated in a non-automatic mode, the technique guide shall specify the requirements of subsections (j)(1)(A) through (C) of this Section ~~above~~ to be followed ~~if operated-in-a-non-automatic-mode~~.

AGENCY NOTE: The Department recognizes that alternate means may be available at the control panel to indicate technique factors for computerized imaging systems.

k) Patient Dose Criteria. Procedures and auxiliary equipment designed to minimize patient and occupational dose commensurate with needed diagnostic information shall be used.
AGENCY NOTE: It is the intent of this subsection (k) to provide for the optimum optical density, resolution and contrast on the film while minimizing patient dose. X-ray films, intensifying screens and other image recording devices should be as sensitive as is consistent with the requirements of the examination.

l) X-ray Film Processing Systems. The darkroom safe light illumination shall be adequate for the film speed(s) and the darkroom operating procedures used to prevent fogging of unprocessed film. The following additional requirements apply to film processing systems:
1) Manual film processing systems shall be monitored by the registrant to assure:
A) The use of a dedicated darkroom timer with an adjustable preset function. The timer shall be used to adjust film processing time according to solution temperature.
B) The use of a dedicated darkroom thermometer. The thermometer shall be used to adjust the film processing time according to solution temperature.
C) The use of a film processing guide. The guide shall contain, at a minimum, information regarding time(s) and temperature(s) (as recommended by the film ~~processing chemical~~ manufacturer) used by the registrant to develop radiographs.
D) The frequency at which film processing chemicals are changed is appropriate for the conditions of use.
2) Automated film processing shall be monitored by the registrant to assure:
A) The temperature of film processing chemicals and the film transport speed is appropriate for the type of film(s) being utilized ~~processed-at-the-film-transport-speed-selected~~.
B) The film processing chemicals used and their replenishing rate (if applicable) are appropriate for the type of film(s) and quantity processed ~~film-transport-speed-selected~~.

m) Gonadal Shielding. Except for cases in which it would interfere with the diagnostic procedure, gonadal shielding of not less than 0.5 millimeter of lead equivalent shall be used for patients (who have not passed the reproductive age) during those radiographic procedures in which the gonads are in the useful beam.
AGENCY NOTE: Protection of the embryo or fetus from radiation dose during radiological examination or treatment of a woman of childbearing age (potentially pregnant) should be given special consideration.

(Source: Amended at 22 Ill. Reg. [illegible] effective MAR 13 1998)

Section 360.50 Fluoroscopic Systems

In addition to the provisions of Sections 360.10, 360.30, 360.40 and 360.41 of this Part, the requirements of this Section apply to x-ray equipment and associated facilities used for fluoroscopy.

a) Beam Limitation. The x-ray field shall be limited by stepless adjustable shutters. In addition:
1) The minimum field size at the greatest SID shall be no greater than 5 centimeters by 5 centimeters.
2) The mechanism(s) (manual/automatic mode selector(s)) provided for activating and positioning the beam-limiting shutters shall function properly. This requirement applies to shutters used in fluoroscopic procedures or spot filming procedures or both fluoroscopic and spot filming procedures.
3) Neither the length nor the width of the x-ray field in the plane of the image receptor shall exceed that of the visible area of

the image receptor by more than three percent of the SID. The sum of the excess length and the excess width shall be no greater than four percent of the SID. This requirement applies to field sizes for fluoroscopic procedures or spot filming procedures or both fluoroscopic and spot filming procedures.

4) For fluoroscopic equipment with only a manual mode of beam limitation, the x-ray field produced shall be limited to the area of the spot film cassette at 40.6 centimeters (16 inches) above the tabletop. Additionally, during fluoroscopy, the operator shall restrict the beam to the area of the input phosphor.

5) Spot film devices shall meet the following additional requirements:

A) Means shall be provided between the source and the patient for adjustment of the x-ray field size in the plane of the image receptor to the size which has been selected on the spot film selector. Such adjustment shall be accomplished automatically except when the x-ray field size in the plane of the image receptor is smaller than that selected;

B) The center of the x-ray field in the plane of the image receptor shall be aligned with the center of the selected portion of the film to within two percent of the SID; and

C) If the angle between the plane of the image receptor and beam axis is variable, a device shall be provided to visually indicate when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

6) The beam limitation requirements of this subsection shall not apply to fluoroscopic systems specifically designed for examination of extremities only and meeting the requirement of subsection (1) of this Section ~~below~~.

b) Fluoroscopic Timer. A manual reset, cumulative timing device shall be used which will either indicate elapsed on-time by an audible signal or turn off the system when the total exposure time exceeds a predetermined limit not exceeding 5 minutes in one or a series of exposures.

c) Primary Barrier/Interlock. These devices shall be provided and shall function so that:

1) The entire cross section of the useful beam is intercepted by the primary protective barrier of the fluoroscopic image assembly at any SID; and

2) The fluoroscopic tube is interlocked to prevent the unit from producing x-rays unless the primary barrier is in position to intercept the useful beam, as specified in subsection (1) of this Section ~~above~~, at all times.

d) Source-Skin Distance. The SSD shall not be less than:

1) 38 centimeters (15 inches) on all stationary fluoroscopes;

2) 20 centimeters (8 inches) on all mobile fluoroscopes; and

3) 9 ~~9.5~~ centimeters (3.5 ~~4~~ inches) for fluoroscopes specifically designed for examination of extremities only and meeting the

requirements of subsection (1) of this Section ~~below~~.

e) Indication of Potential and Current. During fluoroscopy and recording of fluoroscopic images, the kVp ~~kV~~ and the mA shall be continuously indicated at the control panel and/or the operator's position.

f) Activation of the Fluoroscopic Tube. X-ray production in the fluoroscopic mode shall be controlled by a device which requires continuous pressure by the operator for the entire time of any exposure. When recording serial fluoroscopic images, the operator shall be able to terminate the x-ray exposure(s) at any time, but means may be provided to permit completion of any single exposure of the series in process.

g) Entrance Exposure Requirements

1) Maximum Exposure Rate. Fluoroscopic systems shall not be operable at any combination of tube potential and current which will result in an exposure rate in excess of 2.58 mC/kg(10 R) per minute at the point where the center of the useful beam enters the patient, except:

A) During recording of fluoroscopic images; or

B) When an optional high level control is activated (see ~~See~~ subsection (g)(2) ~~below~~).

2) When a high level control is activated, the equipment shall not be operable at any combination of tube potential and current which will result in an exposure rate in excess of 5.15 mC/kg(20 R) per minute at the point where the center of the useful beam enters the patient. In addition, the following requirements apply to high level controls:

A) Separate means of activation of high level controls shall be required. The high level control shall only be operable when continuous manual activation is provided by the operator.

B) A continuous signal audible to the operator shall indicate that the high level control is being employed.

3) Compliance with the requirements of subsections (g)(1) and (2) of this Section ~~above~~ shall be determined using technique factors that produce the maximum exposure rate. For systems employing automatic exposure rate control, material having an equivalency of at least 3 millimeters of lead shall be placed in the primary beam between the image receptor and the radiation measuring device. The lead or equivalent material shall be positioned to ensure that the entire primary beam is blocked.

AGENCY NOTE: Many fluoroscopic systems do not yield their maximum exposure rate at the maximum tube potential or tube current. The exposure rate should be checked at various kVp and mA settings to establish the maximum exposure rate for the system.

4) Fluoroscopic systems shall not be operable at any combination of tube potential and current that will result in an exposure rate in excess of 1.29 mC/kg (5 R) per minute at the point where the

center of the useful beam enters the patient, when measured under the following conditions:

A) Movable grids and compression devices shall be removed from the useful beam during the measurement.

B) For systems without automatic exposure rate control, the measurement shall be performed using technique factors clinically used for a standard adult patient thickness of 23 centimeters.

AGENCY NOTE: An attenuation block or other suitable material should be placed in the beam to protect the imaging system.

C) For systems with automatic exposure rate control, the measurement shall be performed with ~~an attenuation block or other~~ material simulating the standard adult patient thickness of 23 centimeters, in the beam between the radiation measuring device and the image receptor.

AGENCY NOTE: The Department recommends additional measurements be made of the entrance exposure rate for fluoroscopic systems capable of recording fluoroscopic images, and the entrance exposure for spot film techniques for fluoroscopic systems with that modality. In either case, measurements should be made under the conditions specified in subsection (g)(4)(B) of this Section ~~above~~.

D) The requirements of subsection (g)(4) of this Section shall not apply to fluoroscopes specifically designed for examination of extremities only and meeting the requirements of subsection (1) of this Section ~~below~~.

5) Measurements performed pursuant to the requirements of subsections (g)(1) through (4) of this Section ~~above~~ shall meet the following additional requirements:

A) If the source is below the table, the exposure rate shall be determined for the center of the useful beam 1 centimeter above the tabletop or cradle, with the input surface of the fluoroscopic imaging assembly positioned 30 centimeters (12 inches) above the tabletop.

B) If the source is above the table, the exposure rate shall be determined at 30 centimeters (12 inches) above the tabletop with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement.

C) For a fixed SID C-arm type of fluoroscope, the exposure rate shall be determined 30 centimeters (12 inches) from the input surface of the fluoroscopic imaging assembly.

D) For a variable SID C-arm type of fluoroscope, the exposure rate shall be determined 30 centimeters (12 inches) from the input surface of the fluoroscopic imaging assembly with the end of the beam-limiting device or spacer positioned as close as possible to the point of measurement.

E) For a lateral type fluoroscope, the exposure rate shall be determined on the central axis of the primary beam at a point 15 centimeters (6 inches) from the centerline of the x-ray table and in the direction of the x-ray source with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the tabletop is movable, it shall be positioned as closely as possible to the lateral x-ray source, with the end of the beam-limiting device or spacer no closer than 15 centimeters to the centerline of the x-ray table.

AGENCY NOTE: A lateral type fluoroscope is a fluoroscope that cannot be rotated so that the source or the fluoroscopic imaging assembly can be positioned below the fluoroscopic table or cradle.

F) For a fluoroscopic system specifically designed for examination of extremities only, the exposure rate shall be determined for the minimum source-skin distance.

6) The measurements required by this subsection (g) ~~above~~ shall be performed when the system is inspected as specified in 32 Ill. Adm. Code 410 as well as after any maintenance of the system which might affect the exposure rate.

7) The results of the measurements required by subsections (g)(1), (2) and (4) of this Section ~~above~~ shall be posted or available at the control panel. The measurement results shall be stated in millicoulombs per kilogram (roentgens) per minute or microcoulombs per kilogram (milliroentgens) per second and shall include the technique factors used in determining such results. The name of the individual performing the measurements and the date the measurements were performed shall be included in the results.

AGENCY NOTE: The resolution and efficiency of the fluoroscopic imaging system should be evaluated periodically, whenever deterioration in the imaging system is suspected and when the measured exposure rate exceeds the standards of this Section.

h) Barrier Transmitted Radiation Rate Limits

1) The exposure rate due to transmission through the primary protective barrier shall not exceed 0.516 microC/kg (2mR) per hour at 10 centimeters from any accessible surface of the fluoroscopic imaging assembly beyond the plane of the image receptor per 258 microC/kg (1R) per minute of entrance exposure rate.

2) Measuring Compliance of Barrier Transmission

A) The exposure rate due to transmission through the primary protective barrier shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

B) If the source is below the tabletop, the exposure rate shall be determined with the input surface of the fluoroscopic

imaging assembly positioned 30 centimeters above the tabletop.

C) If the source is above the tabletop and the SID is variable, the exposure rate shall be determined with the end of the beam-limiting device or spacer as close to the tabletop as it can be placed, provided that it shall not be closer than 30 centimeters.

D) Movable grids and compression devices shall be removed from the useful beam during the measurement.

E) An attenuation block shall be positioned in the useful beam 10 centimeters from the point of measurement of entrance exposure rate and between this point and the input surface of the fluoroscopic imaging assembly.

i) Staff and Ancillary Personnel Protection. The operator, assistants and observers allowed in the examining room shall be protected from scatter radiation by protective aprons of not less than 0.25 millimeter lead equivalent or whole body protective barriers or shall be positioned at a sufficient distance to ensure that the individual does not receive a radiation dose in excess of the limits specified in 32 Ill. Adm. Code 340.310.

j) Control of Scattered Radiation

1) For fluoroscopic systems utilizing an x-ray tube that is mounted below the table, the table shall be provided with shielding (bucky slot cover) equivalent to 0.25 millimeter lead equivalent to attenuate scattered radiation emanating from below the table.

2) A shield of at least 0.25 millimeter lead equivalent, such as overlapping protective drapes or hinged or sliding panels, shall be provided and used to intercept scatter radiation which would otherwise reach the operator and others near the machine. This shielding shall not be a substitute for the wearing of a protective apron (0.25 millimeter lead equivalent) for protection against scattered radiation.

3) Where sterile fields or special procedures prohibit the use of protective barriers or drapes, subsection (j)(2) of this Section ~~above~~ shall not apply.

k) Additional Requirements for Stationary Fluoroscopic Systems Used for Cardiac Catheterization Procedures

1) Protective barriers shall be available for use by individuals whose presence is required in the room during activation of the x-ray tube(s). If a protective barrier includes or consists of a transparent viewing panel, the viewing panel shall afford protection of not less than 0.5 millimeter of lead equivalent.

2) Protective aprons of not less than 0.25 millimeter of lead equivalent shall be worn in the fluoroscopy room by all individuals (except the patient).

AGENCY NOTE: Because modern equipment allows great flexibility in the direction of the beam, individuals in the room should step back from the x-ray system and behind protective barriers during

activation of the x-ray tube(s).

l) Additional Requirements for Fluoroscopic Systems Specifically Designed for Examination of Extremities Only

1) The radiation safety procedures required pursuant to Section 360.30(j) of this Part shall include the following:

A) A warning concerning the potential for, and the hazards of, increased patient radiation dose associated with x-ray systems employing short source-skin distances;

B) Procedures for obtaining imaging magnification with minimum patient dose, including imaging systems or screen-film combinations;

C) Technique factors for specific examinations for which the system is designed;

D) Radiation exposure data, including skin entrance exposure for each set of technique factors used.

2) The x-ray system shall be clearly labeled as follows: "For Examination of Extremities Only."

3) The source-skin distance shall be limited as specified in subsection (d) of this Section ~~above~~.

4) Fluoroscopic systems specifically designed for examination of extremities only shall be used solely for examination of extremities.

m) Radiation Therapy Simulation Systems. Radiation therapy simulation systems shall be exempt from the requirements of subsections (a), (b), (c), (g) and (h) of this Section ~~above~~ provided that:

1) Such systems are designed and used in such a manner that no individual other than the patient is in the x-ray room during periods of time when the system is producing x-rays; and

2) Such systems that do not meet the requirements of subsection (b) of this Section ~~above~~ are provided with a means of indicating the cumulative time that an individual patient has been exposed to x-rays. Procedures shall require in such cases that the timer be reset between examinations.

n) Operator Restrictions. No person shall intentionally administer radiation to a human being with a fluoroscopic radiation machine unless such person is licensed to practice a treatment of human ailments under the Medical Practice Act of 1987, the Illinois Dental Practice Act or the Podiatric Medical Practice Act of 1987, except:

1) An accredited medical radiographer may operate a fluoroscope for static functions when interpretation of the results is not required and only under the direct supervision of a licensed practitioner who is within visual contact; or

2) An accredited medical radiographer or radiation therapist may operate a fluoroscope for radiation therapy simulation procedures under the direct supervision of a licensed practitioner.

(Source: Amended at 22 Ill. Reg. [illegible], effective MAR 13 1998)

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Section 360.60 Radiographic Systems Other Than Fluoroscopic, Dental, Veterinary or Computed Tomography Systems

In addition to the provisions of Sections 360.10, 360.30, 360.40 and 360.41 of this Part, the requirements of this Section apply to x-ray equipment and associated facilities used in the healing arts of medicine, chiropractic and podiatry. It does not apply to fluoroscopic, dental, veterinary or computed tomography systems.

a) Beam Limitation. The useful beam shall be limited to the area of clinical interest.

1) Stationary General Purpose and Mobile/Portable X-Ray Systems

A) Variable X-Ray Field Limitation. An adjustable collimator shall be provided with means for independent stepless adjustment of the size of the x-ray field.

B) Visual Indication of Field Size. Means shall be provided for visually defining the perimeter of the x-ray field. The total misalignment of the edges of the visually defined field, with respect to the edges of the x-ray field, along either the length or the width of the visually defined field, shall not exceed two percent of the distance from the source to the center of the visually defined field when the surface upon which it appears is perpendicular to the axis of the x-ray beam.

AGENCY NOTE: When a light localizer is used to define the x-ray field, it should provide an average illumination of not less than 100 lux (9 footcandles) at 100 centimeters or at the maximum SID, whichever is less.

~~2) Additional Requirements for Stationary General Purpose X-Ray Systems. In addition to the requirements of subsection (1) above, all stationary general-purpose x-ray systems shall meet the following requirements:~~

~~A) The beam-limiting device shall numerically indicate the x-ray field size in the plane of the image receptor to which it is adjusted.~~

~~B) The x-ray field dimensions shall be specified in centimeters and/or inches and shall be such that aperture adjustments result in x-ray field dimensions in the plane of the image receptor that do not differ from the numerical indicated dimensions by more than plus or minus two percent of the SID when the beam axis is perpendicular to the plane of the image receptor.~~

~~C) The beam-limiting device shall be provided with SID scales that reflect the actual SID(s) used for radiographic procedures.~~

~~D) SID Indication~~

~~i) Means shall be provided to indicate the SID.~~

~~ii) SIDs shall be indicated in centimeters and/or inches and the measured SID shall correspond to the indicated value to within two percent.~~

~~E) X-Ray Field/Image Receptor Alignment. Means shall be provided to:~~

~~i) Indicate when the axis of the x-ray field is perpendicular to the plane of the image receptor; and~~

~~ii) Align the center of the x-ray field with respect to the center of the image receptor to within two percent of the SID.~~

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2) ~~3)~~ Special Purpose X-Ray Systems

~~A) SID Indication~~

~~i) Means shall be provided to indicate the SID.~~

~~ii) SIDs shall be indicated in centimeters and/or inches and the measured SID shall correspond to the indicated value to within two percent.~~

A) ~~B)~~ Means shall be provided to limit the x-ray field in the plane of the image receptor so that such field does not exceed each dimension of the image receptor by more than two percent of the SID when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

~~C) Means shall be provided to align the center of the x-ray field with the center of the image receptor to within two percent of the SID.~~

B) ~~D)~~ The requirements of subsection (a)(2)(A) ~~(B)~~ of this Section above may be met:

i) With a system that meets the requirements specified in subsection (a)(1) of this Section ~~(1) above~~; or

ii) With an assortment of removable, fixed-aperture, beam-limiting devices sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is used, with each such device having permanent, clearly legible markings, in centimeters and/or inches, to indicate the image receptor size and SID for which it is designed; or

iii) With a beam-limiting device having multiple fixed apertures sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is used. Permanent, clearly legible markings, in centimeters and/or inches, shall indicate the image receptor size and SID for which each aperture is designed and shall indicate which aperture is in position for use.

C) ~~E)~~ Exemptions

i) Radiation Therapy Simulation Systems. Radiation therapy simulation systems shall be exempt from the beam limitation requirements of subsection (a)(2)(A) of this Section ~~(B) above~~.

ii) Mammography Systems. Mammography systems shall be

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exempt from the requirements of subsection (a)(2)(B) of this Section ~~(C) above~~.

~~4) X-Ray--Systems-Designed-for-One-Image-Receptor-Size.--Radiographic equipment-designed-for-only-one-image-receptor-size--at--a--fixed SID--shall-be-provided-with-means-to-limit-the-x-ray-field-at-the plane-of-the-image-receptor-to-dimensions-no-greater--than--those of--the-image-receptor-and-to-align-the-center-of-the-x-ray-field with-the-center-of-the-image-receptor-to-within--two--percent--of the--SID,--or-shall-be-provided-with-means-to-both-size-and-align the-x-ray-field-such-that-the-x-ray-field-at--the--plane--of--the image--receptor--does--not--extend--beyond--any-edge-of-the-image receptor.~~

b) Radiation Exposure Control Devices

1) Timers. Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, preset number of pulses or preset radiation exposure to the image receptor. Also, it shall not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

2) X-Ray Control

A) An x-ray control shall be incorporated into each x-ray system such that an exposure can be terminated by the operator at any time except for:

i) Exposures of 0.5 second or less; or

ii) During serial radiography when means shall be provided to permit completion of any single exposure of the series in process.

B) The exposure switch shall be a dead-man switch.

3) Automatic Exposure Controls (AEC). Systems which are provided with automatic exposure control devices shall incorporate a back-up timer to terminate the radiation exposure in the event of AEC failure. In addition, they shall meet the following requirements:

A) Indication shall be made on the control panel when this mode of operation is selected; and

B) A visible signal shall indicate when an exposure has been terminated by the back-up timer, and manual resetting shall be required before further automatically timed exposures can be made.

c) Source-Skin Distance (SSD). All mobile or portable radiographic systems shall be provided with means to limit the SSD to 30 centimeters or greater.

d) Linearity. For equipment that is operated at more than one x-ray tube current or current-time product setting, the average ratios of exposure (microcoulombs per kilogram or milliroentgens) to the indicated milliampere-seconds (mAs) product obtained at any two tube current or current-time product settings utilized shall not differ by more than 0.10 times their sum. This requirement is mathematically

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represented by the following:

$$[\bar{X}[1] - \bar{X}[2]] \leq [0.10(\bar{X}[1] + \bar{X}[2])]$$

where $\bar{X}[1]$ and $\bar{X}[2]$ are the average microC/kg/mAs or mR/mAs values obtained at any two tube current or current-time product settings utilized. Compliance shall be determined at any fixed x-ray tube potential within the rage of 40 percent to 100 percent of the maximum rated tube potential.

e) Medical Radiographic Entrance Exposure Limits. The in-air exposure determined for the technique used for the specified average adult patient for routine medical radiography shall not exceed the entrance exposure limits shown below: (See Section 360.Appendix A of this Part for measurement protocol and calculation of exposure at skin entrance~~)~~.)

Technique	Thickness (cm)	Exposure Limit (microC/kg)	(mR)
Chest (PA), Grid	23	9	35
Chest (PA), Non-Grid	23	8	30
Abdomen (KUB)	23	155	600
Lumbo-Sacral Spine (AP)	23	206	800
Cervical Spine (AP)	13	52	200
Skull (lateral)	15	65	250
Foot (D/P)	8	26	100

AGENCY NOTE: These exposures are maximums. With careful selection of technique factors, adjustment of film processing systems, and choice of film and screen-film combinations, patient exposures can be further reduced.

f) SID Indication

1) Means shall be provided to indicate the SID.

2) SIDs shall be indicated in centimeters and/or inches and the measured SID shall correspond to the indicated value to within two percent.

g) X-Ray Field/Image Receptor Alignment. Means shall be provided to:

1) Indicate when the axis of the x-ray field is perpendicular to the plane of the image receptor; and

2) Align the center of the x-ray field with respect to the center of the image receptor to within two percent of the SID.

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(Source: Amended at 22 Ill. Reg. 5904, effective MAR 18 1998)

Section 360.71 Additional Requirements for Facilities Performing Mammography

In addition to the provisions of Sections 360.10, 360.30, 360.40, 360.41, 360.60 of this Part and 32 Ill. Adm. Code 400 and 401, the requirements of this Section apply to mammography systems and associated facilities used for mammography.

a) Physician Supervision.Mammography operations and procedures shall be under the supervision of a physician licensed under the Medical Practice Act of 1987 ~~(Ill.-Rev.-Stat.-1991,-ch.-111,-par.--4400)~~ [225 ILCS 60] to practice medicine in all of its branches.
AGENCY NOTE: The individual interpreting clinical images of the breast should be a licensed practitioner of the healing arts trained in the imaging modality being used and should be certified in diagnostic radiology ~~or--eligible--for--certification~~ by either the American Board of Radiology, ~~in--diagnostic--radiology--or--general radiology-or~~ the American Osteopathic Board of Radiology, or Royal College of Physicians and Surgeons of Canada. ~~Facilities-performing mammography-are-encouraged--to--seek--accreditation--by--the--American College-of-Radiology.~~

b) Medical Radiographers Who Perform Mammography. Registrants shall assure that medical radiographers who perform mammography procedures have met the requirements for initial training and continuing education in mammography, as set forth in 32 Ill. Adm. Code 401.160 and 401.Appendix C.

c) Mammography shall only be performed with a special purpose radiation machine specifically designed for and used solely for mammography procedures.

d) Mammography systems shall be provided with compression devices parallel to the imaging plane to immobilize and compress the breast. Compression devices shall:
1) Be capable of maintaining a compression force of at least 11.3 kilograms (25 pounds) for at least 15 seconds; and
2) Not be capable of exceeding a compression force of more than 18.1 kilograms (40 pounds) when used in an automatic or power drive mode.
AGENCY NOTE: Mammography compression devices should be tested at regular intervals to ensure the compression force is adequate but not excessive and that the devices release properly according to the manufacturer's specifications.

e) Half-Value Layer. Notwithstanding the requirements of Section 360.40(a) of this Part, the following requirements apply to mammography systems:
1) For mammography systems operating at x-ray tube potentials of less than 35 kVp, the half-value layer (HVL) in millimeters of aluminum of the useful beam shall be equal to or greater than the

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product of the tube potential in kilovolts multiplied by 0.01, plus 0.03 when measured with the compression paddle in the beam.
Example: If the HVL is measured with the compression paddle in the beam, at a tube potential of 27 kVp, the minimum acceptable HVL is 0.30 ~~0.27~~ millimeter of aluminum.
AGENCY NOTE: Prior to making HVL determinations, the kVp of the useful beam should be measured to verify the accuracy of the indicated kVp values. If a discrepancy exists between measured and indicated values, the measured value should be used for the calculation of minimum HVL (see also Section 360.40(f)(3) of this Part).
2) For non-screen-film applications, the half-value layer shall not be less than 1.0 millimeter of aluminum equivalent.
3) The half-value layer shall be measured with the compression device in the beam and shall be measured at the same tube potential used in Section 360.Appendix B of this Part, Mammography Dose Measurement Protocol and Section 360.Appendix C of this Part, Mammography Phantom Image Evaluation.
AGENCY NOTE: If the measured half-value layer is significantly greater than the specified minimum, image contrast will be reduced and overall image quality will be degraded. For screen-film mammography systems, it is recommended that the HVL not exceed the minimum acceptable HVL by more than 0.1 millimeter of aluminum, as specified in the American College of Radiology; Mammography Quality Control for Medical Physicists, Revised Edition, 1994.
AGENCY NOTE: A copy of this report is available for public inspection at the Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, Illinois 62704. Copies of this report may also be obtained from the American College of Radiology, 1891 Preston White Drive, Reston, VA 22091.

f) Source-Image Receptor Distance. Mammography equipment shall not be operated at any source-image receptor distance less than 50 centimeters.

g) Focal Spot Size. The nominal focal spot size, as specified by the x-ray tube manufacturer, shall not exceed 0.6 millimeter.

h) Mammography Exam Dose Limits. (See Section 360.Appendix B of this Part for the required measurement protocol.) The mean glandular dose for one craniocaudal view of a 4.2~~4~~.5-- centimeter compressed breast (50 percent adipose and 50 percent glandular) shall not exceed:
1) 1mGy(100 mrad) forscreen-film radiographs not employing the use of grids,
2) 3mGy(300 mrad) forscreen-film radiographs employing the use of grids, or
3) 4mGy(400 mrad) for xerography.

i) Mammography Exposure Rate. Mammography systems shall have sufficient x-ray output to complete the exposure required for the dose measurement of subsection (h) of this Section ~~above~~ within a time of

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2.5 seconds or less.
AGENCY NOTE: Mammographic x-ray systems should have means to indicate the milliampere-seconds (mAs) resulting from each exposure made with automatic exposure control.

j) Mammography Phantom Image Evaluation. Mammography equipment shall be subjected to a phantom image evaluation using the mammography phantom specified in subsection (j)(2) of this Section ~~below~~.

1) A phantom image evaluation shall be performed annually as part of the inspection procedure required in 32 Ill. Adm. Code 410.50, using the mammography phantom image evaluation protocol found in Section 360.Appendix C of this Part.
   A) Phantom images produced during an inspection by a Departmental inspector shall be retained by the Department.
   B) Phantom images produced during an inspection by a ~~qualified~~ nondepartment qualified inspector shall be submitted to the Department at the time of submission of inspection reports.
2) The mammography phantom used for phantom image evaluation shall be composed of material that is equivalent to a nominal 4.2~~4~~.5-centimeter compressed breast of average density (i.e., 50 percent adipose and 50 percent glandular tissue) and shall contain the following objects:
   A) Spherical masses, composed of phenolic plastic, with thicknesses of: 2.00, 1.00, 0.75, 0.50 and 0.25 millimeter;
   B) Specks, composed of aluminum oxide, with diameters of: 0.54, 0.40, 0.32, 0.24 and 0.16 millimeter;
   C) Fibers, composed of nylon, with thicknesses of: 1.56, 1.12, 0.89, 0.75, 0.54 and 0.40 millimeter.
   AGENCY NOTE: The Mammographic Accreditation Phantom Model 156, manufactured by Radiation Measurements, Inc., meets the above criteria and was chosen for use by the American College of Radiology's Mammography Accreditation Program.
3) Phantom images submitted to the Department shall be labeled with or include as an attachment the following information:
   A) Name of the facility and machine reference number;
   B) Technique factors used to produce the image;
   C) Identification of the film processing equipment;
   D) Date the image was produced; and
   E) Name or inspector identification number of the individual performing the test.
4) The mammography system shall be capable of producing images of the mammography phantom in which the following objects are visualized:
   A) The three largest masses with thicknesses of 2.0, 1.0 and 0.75 millimeter.
   B) The three largest speck groups with diameters of 0.54, 0.40 and 0.32 millimeter.
   C) The four largest fibers with thicknesses of 1.56, 1.12, 0.89 and 0.75 millimeter.

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5) The Department shall evaluate the images produced during mammography phantom image evaluation and shall report the results of the evaluation to the facility.
   AGENCY NOTE: The Department will evaluate mammography phantom images using procedures recommended by the American College of Radiology in: American College of Radiology; Mammography Quality Control for Medical Physicists, Revised Edition, 1994 ~~April 1992. AGENCY NOTE: A copy of this report is available for public inspection at the Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, Illinois 62704. Copies of this report may also be obtained from the American College of Radiology, 1891 Preston White Drive, Reston, VA 22091.~~

k) Quality Assurance. A quality assurance (QA) program shall be established and maintained at each facility performing mammography procedures. The QA program shall include a performance evaluation of the mammographic x-ray machine and the film processor. Each facility shall have available for daily use the mammography phantom specified in subsection (j)(2) of this Section ~~above~~, a densitometer and a sensitometer.

1) A diagnostic imaging specialist shall establish and provide administrative oversight over the quality assurance program.
2) The quality assurance program shall include but not be limited to the following:
   A) A list of names and qualifications of individuals responsible for:
      i) Administration of the QA program;
      ii) Performance of QA tests; and
      iii) Repairing or servicing the x-ray equipment.
   B) A QA protocol which includes the following:
      i) A description of the QA tests to be performed;
      ii) The frequency of each QA test;
      iii) Criteria of acceptability for each QA test; and
      iv) A description of actions to be taken if established criteria are not met.
3) Quality assurance testing shall include, but not be limited to, the following tests, which shall be performed at the prescribed frequency.
   A) The film processor shall be subjected to a performance evaluation each day before the processing of clinical or phantom images. Evaluation shall include measurement of temperature and densitometer measurements of sensitometer-exposed film which has been processed in the film processor.
   B) Mammography systems shall be tested for image quality each calendar month. Image quality testing shall be performed using the mammography phantom specified in subsection (j)(2) of this Section ~~above~~ and the mammography phantom image evaluation protocol found in Section 360.Appendix C of this

Part. In addition, the following requirements apply to image quality testing:

i) The individual identified in subsection (k)(1) of this Section above shall provide such training as is necessary to the individual assigned to perform phantom image quality evaluation.

ii) Image quality testing shall be repeated after any change in or replacement of components of the x-ray machine or film processor which may affect the image quality, as determined by the individual identified in subsection (k)(1) of this Section above.

iii) Each phantom image produced shall be labeled with the date, technique factors and equipment information if the facility contains more than one mammography machine.

iv) The registrant shall assure that the phantom image produced pursuant to this subsection meets the criteria of subsection (j)(4) of this Section above.

v) Mammography systems not capable of producing a phantom image meeting the criteria of subsection (j)(4) of this Section above shall not be used to image human patients until a phantom image has been produced meeting the criteria of subsection (j)(4) of this Section above.

4) Mobile mammography systems shall be tested using the mammography phantom image evaluation after each relocation and prior to use on patients or shall meet the following requirements:

A) A diagnostic imaging specialist shall establish a protocol for measurement of the radiation output of the mammography system, including the radiation measuring device to be used, procedures for performing the measurement and the anticipated result of the measurement.

B) Measurements shall be performed using the technique factors that were used for the most recent phantom image evaluation (see subsection (k)(3)(B) of this Section above). If a change is made in the technique factors used for the measurements required in this subsection, the image quality shall be tested using the mammography phantom image evaluation protocol found in Section 360.Appendix C of this Part.

AGENCY NOTE: If the phantom image evaluation is performed using a phototimer, the diagnostic imaging specialist may specify appropriate technique factors that approximate those used by the phototimer for the measurements required in this Section.

C) After each relocation of a mobile mammography system, measurements of the radiation output of the machine shall be performed according to the protocol established in subsection (k)(4)(A) of this Section above.

D) If the radiation output measurement of subsection (k)(4)(C) of this Section above exceeds plus or minus 15 percent of the value established by the diagnostic imaging specialist in subsection (k)(4)(A) of this Section above, the system shall not be used to image human patients until the cause for the variation has been investigated and corrected.

E) Records of radiation output measurements for mobile mammography systems shall be maintained at the location of the mammography system for a period of not less than one inspection cycle (see 32 Ill. Adm. Code 410.60(d)).

AGENCY NOTE: The Department recommends that mobile mammography systems be tested for image quality after each relocation and prior to use on patients, with the mammography phantom image evaluation protocol in Section 360.Appendix C of this Part.

5) A diagnostic imaging specialist shall conduct a review of the quality assurance program each year. Such review shall include evaluation of the results of quality assurance testing.

AGENCY NOTE: In addition to the quality assurance testing required in this Section, facilities performing mammography should establish a quality assurance program that provides for analysis of repeated mammography exams, testing of screen-film contact for all cassettes used to produce clinical images, testing of film fogging in the darkroom and measurement of the force applied by the compression device in both manual and power modes (if applicable).

l) Records

1) The registrant shall maintain and have available for review at the facility, records of quality assurance testing performed as required in subsection (k) of this Section above.

A) Records of film processor performance evaluation shall contain the date the test was performed, identification of the person performing the test and the results of the test including densitometry measurements.

B) Records of image quality testing shall include the mammography phantom image, labeled with the information required in subsection (k)(3) of this Section above and the results of the mammography phantom image evaluation including the number, type and size of phantom objects visualized.

C) The registrant shall maintain at the facility, for a period of at least one inspection cycle (see 32 Ill. Adm. Code 410.60(d)), the records specified in subsections (l)(1)(A) and (B) of this Section above.

2) Unless they are transferred directly to the patient or the patient's physician, mammography images or films shall be retained by the provider of the mammography service for a minimum

of 60 months. Mammography images or films transferred to a patient's physician shall be retained by the physician for a minimum of 60 months. These retention periods are a minimum and shall not reduce any other medical record retention requirements established by statute or regulation.

AGENCY NOTE: The Department recommends that when a provider of the mammography service transfers mammography films or images to a patient's physician, the physician should be notified of the requirement to retain mammography images for 60 months.

m) Additional Operator Requirements. *Every operator of a radiation installation at which mammography services are provided shall ensure and have confirmed by each mammography patient that the patient is provided with a pamphlet which is orally reviewed with the patient and which contains the following:*

1) *how to perform breast self-examination;*

2) *that early detection of breast cancer is maximized through a combined approach, using monthly breast self-examination, a thorough physical examination by a physician and mammography performed at recommended intervals;*

3) *that mammography is the most accurate method for making an early detection of breast cancer, however, no diagnostic tool is 100% effective;*

4) *that if the patient is self-referred and does not have a primary care physician, or if the patient is unfamiliar with the breast examination procedures, that the patient has received information regarding public health services where she can obtain a breast examination and instructions.* [420 ILCS 40/5(c)]

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 13 1998)

Section 360.75 Computed Tomography (CT) Systems

a) Requirements for Equipment

1) Termination of Exposure

A) In the event of equipment failure affecting data collection, means shall be provided to terminate the x-ray exposure automatically, either by de-energizing the x-ray source or by shuttering the x-ray beam, through the use of either a back-up timer or devices which monitor equipment function.

B) A visible signal shall indicate when the x-ray exposure has been terminated through the means required by subsection (a)(1)(A) of this Section above.

C) The operator shall be able to terminate the x-ray exposure at any time during a scan, or series of scans, of greater than 0.5 second duration.

2) Tomographic Plane Indication and Alignment

A) Means shall be provided to permit visual determination of

the location of a reference plane. This reference plane can be offset from the location of the tomographic planes.

B) If a device using a light source is used to satisfy subsection (a)(2)(A) of this Section above, the light source shall provide illumination levels sufficient to permit visual determination of the location of the tomographic plane or reference plane under ambient light conditions of up to 500 lux (45 footcandles).

C) The total error in the indicated location of the tomographic plane or reference plane shall not exceed 5 millimeters.

D) The deviation of indicated scan increment versus actual increment shall not exceed plus or minus 1 millimeter with a typical patient mass resting on the patient support device. The patient support device shall be moved incrementally from a typical starting position to the maximum incremental distance or 30 centimeters, whichever is less, and then returned to the starting position. If the CT system has the capability of variable gantry angles, the compliance measurements shall be performed with the CT gantry positioned at zero degrees.

3) Beam-On and Shutter Status Indicators. The CT x-ray control panel and gantry shall provide visual indication whenever x-rays are produced and, if applicable, whether the shutter is open or closed.

4) Technique Indicators. The CT x-ray control panel shall provide visual indication of the technique factors, tomographic section thickness and scan increment prior to the initiation of a scan or a series of scans.

b) Facility Design Requirements

1) The control panel shall be located behind a protective barrier.

2) Communication. Provision shall be made for two-way aural communication between the patient and the operator at the control panel.

3) Viewing Systems. Windows, mirrors, closed-circuit television or an equivalent system shall be provided to permit continuous observation of the patient during irradiation and shall be located so that the operator can observe the patient from the control panel.

c) Radiation dose measurements shall be performed by a diagnostic imaging specialist on each CT x-ray system. Such measurements shall be specified in terms of the multiple scan average dose (MSAD), using a head phantom and the facility's technique factors most frequently used for a CT examination of the head and shall be performed:

1) At the time of the inspection required pursuant to 32 Ill. Adm. Code 410 and at intervals specified by a diagnostic imaging specialist and after any change or replacement of components which, in the opinion of the diagnostic imaging specialist, could cause a change in the radiation output;

2) With a dosimetry system that has been calibrated within the preceding 12 months. The calibration of such system shall have no more than a three-step (tertiary) calibration, traceable to the National Institute of Standards and Technology; and
3) Using the computed tomography dose measurement protocol found in Section 360.Appendix D of this Part.
AGENCY NOTE: The Department recognizes that other phantoms and protocols are available to provide accurate dose measurements as specified in this Section. The Department will consider use of such phantoms and protocols as satisfying this Section if the intent of the regulation is met.

d) Quality assurance procedures shall be conducted on each CT system and shall meet the following requirements:
1) The quality assurance procedures shall be in writing and shall have been developed by a diagnostic imaging specialist. Such procedures shall include, but need not be limited to, the following:
A) Specifications of the tests that are to be performed, including instructions to be employed in the performance of those tests; and
B) Specifications of the frequency at which tests are to be performed, the acceptable tolerance for each parameter measured and actions to be taken if tolerances are exceeded.
2) Quality assurance procedures shall include acquisition of images using a CT phantom which has the capability of providing an indication of the resolution capability of the system.
AGENCY NOTE: The CT phantom used for quality assurance procedures should have the capability of providing an indication of contrast scale, noise, nominal tomographic section thickness, resolution capability of the system for low and high contrast objects and relative densities (CT numbers) for water or other reference material.

e) The registrant shall maintain at the facility written records of the radiation dose measurements and quality assurance testing performed, as required in subsections (c) and (d) of this Section ~~above~~, for inspection by the Department for a period of at least one inspection cycle (see 32 Ill. Adm. Code 410.60(d)). Such records shall include, but need not be limited to, the following:
1) The date of the test and identification of the person performing the test;
2) Identification of the type of testing that was performed; and
3) Notation of whether the results of the testing were within the parameters established by the diagnostic imaging specialist.
AGENCY NOTE: The Department recommends that the registrant retain the results of quality assurance testing in the form of photographic copies of the images obtained from the image display device or images stored in digital form on a storage medium compatible with the CT x-ray system. Images retained to fulfill

the requirements of this subsection should be labeled with the information required in subsections (e)(1) through (3) of this Section ~~above~~.

f) Operating Procedures. Information shall be available at the control panel regarding the operation of the system. Such information shall include written quality assurance procedures, as required in subsection (d)(1) of this Section ~~above~~.

(Source: Amended at 22 Ill. Reg. 5984, effective MAR 13 1998)

Section 360.90 Dental Radiographic Systems

In addition to the provisions of Sections 360.10, 360.30 and 360.40 of this Part, the requirements of this Section apply to x-ray equipment and associated facilities used for dental radiography. Refer to Section 360.50 of this Part for requirements for dental fluoroscopic systems.

a) General Requirements
1) Timers. Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, preset number of pulses or preset radiation exposure to the image receptor. Also, it shall not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.
2) X-Ray Control. An x-ray control shall be incorporated into each x-ray system such that an exposure can be terminated by the operator at any time except for exposures of 0.5 second or less.
3) Exposure Switch Arrangement. The exposure switch shall be a dead-man switch and shall be arranged so that the operator can be behind a protective barrier or at least 1.83 meters (6 feet) from the patient and the tube housing during an exposure.

b) Additional Requirements for Dental Intraoral Systems
1) Source-Skin Distance (SSD). X-ray systems designed for use with an intraoral image receptor shall be provided with means to limit the SSD to not less than:
A) 18 centimeters if operable above 50 kVp; or
B) 10 centimeters if operable at 50 kVp and below.
2) Beam Limitation. Radiographic systems designed for use with an intraoral image receptor shall be provided with means to limit the x-ray beam such that the x-ray field, at the minimum SSD, shall be containable in a circle having a diameter of no more than 7 centimeters.
3) Dental Radiographic Exposure Limits (Single Film). The entrance exposure to an adult patient for a routine intraoral bitewing exam shall not exceed the limit specified for the kVp used in the table below. Exposures are specified as free-in-air exposures without backscatter.

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Tube Potential (kVp)	"D" Speed Film (microC/kg)	(mR)	"E" Speed Film (microC/kg)	(mR)
50	142	550	72	280
55	134	520	65	250
60	121	470	57	220
65	107	415	49	190
70	93	360	43	165
75	80	310	36	140
80	67	260	30	115
85	61	235	27	105
90	54	210	25	95
95	50	195	22	85
100	46	180	18	70

Linear extrapolation or interpolation shall be used for an x-ray tube potential (kVp) not listed in the table.
AGENCY NOTE: The exposures specified in the above table were empirically determined by a panel of dentists in a U.S. FDA study.

4) The kVp shall be measured at the time the entrance exposure is determined pursuant to subsection (b)(3) of this Section ~~above~~ to determine the correct exposure limit to be applied.

c) Beam Limitation Requirements for Dental Extraoral Systems

1) Dental rotational panoramic systems shall be provided with means to limit the x-ray beam to the imaging slit in the transverse axis and shall not exceed a total of 13 millimeters (0.5 inch) larger than the imaging slit in the vertical axis.

2) All other dental extraoral radiographic systems (e.g., cephalometric) shall be provided with means to both size and align the x-ray field so that it does not exceed each dimension of the image receptor by more than two percent of the SID when the axis of the x-ray beam is perpendicular to the plane of the image receptor ~~extend beyond any edge of the image receptor by more than two percent of the SID~~.

d) Additional Requirements for Dental Radiography

1) Patient and film holding devices shall be used when the techniques permit;

2) The tube housing and the position indicating device shall not be hand-held during an exposure;

3) The x-ray system shall be operated in such a manner that the useful beam at the patient's skin does not exceed the criteria specified in subsection (b)(2) of this Section ~~above~~;

4) Personnel Protection. The operator shall be behind a protective barrier or be provided with a protective apron of not less than 0.25 millimeter lead equivalent, or at least 1.83 meters (6 feet) from the patient and the tube housing during an exposure. Individuals whose presence is required in the room during an

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x-ray examination shall be protected from leakage and scatter radiation by protective aprons of not less than 0.25 millimeter lead equivalent or a protective barrier or shall be positioned at a sufficient distance to ensure that the individual does not receive a radiation dose in excess of the limits specified in 32 Ill. Adm. Code 340.310.
AGENCY NOTE: Strict adherence to radiation protection practices should minimize occupational dose and may eliminate the need for individual monitoring. The requirements for individual monitoring are specified in 32 Ill. Adm. Code 340.520.

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 13 1998)

Section 360.100 Veterinary Radiographic Systems

In addition to the provisions of Sections 360.10, 360.30 and 360.40 (except Section 360.40(a)) of this Part, the requirements of this Section apply to x-ray equipment and associated facilities used for radiography with veterinary systems.

a) Beam Limitation. The useful beam shall be limited to the area of clinical interest. The size of the image receptor used for each radiographic projection shall be consistent with the objectives of the examination.

1) Limitation Criteria. Means shall be provided to limit the x-ray field in the plane of the image receptor so that the field does not exceed each dimension of the image receptor by more than two percent of the SID when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

2) Means shall be provided to align the center of the x-ray field with the center of the image receptor to within two percent of the SID.

3) The requirements of subsection (a)(1) of this Section ~~above~~ may be met with:

A) An adjustable collimator with a field defining light~~, meeting the requirements specified in Section 360.60(a)(1)~~; or

B) An assortment of removable, fixed-aperture, beam-limiting devices sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is used, with each such device having permanent, clearly legible markings in centimeters and/or inches, to indicate the image receptor size and SID for which it is designed; or

C) A beam-limiting device having multiple fixed apertures sufficient to meet the requirement for each combination of image receptor size and SID for which the unit is used. Permanent, clearly legible markings, in centimeters and/or

inches, shall indicate the image receptor size and SID for which each aperture is designed and shall indicate which aperture is in position for use.

4) SID Indication
   A) Means shall be provided to indicate the SID.
   B) SIDs shall be indicated in centimeters and/or inches and the measured SID shall correspond to the indicated value to within two percent.

b) Exposure Switch Arrangement. The exposure control switch shall be arranged so the operator can be at least 1.83 meters (6 feet) from the animal, the x-ray tube and the useful beam.

c) Radiation Exposure Control Devices
   1) Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, preset number of pulses or preset radiation exposure to the image receptor. Also, it shall not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.
   2) The exposure switch shall be a dead-man switch.

d) Veterinary fluoroscopic, computed tomography and therapy systems shall meet the requirements specified in Sections 360.50, 360.75, 360.110 and 360.120 of this Part, except that the requirements pertaining to aural communication specified in Sections 360.75(b)(2), 360.110(a)(8) and (e)(5) and 360.120(a)(6) and (g)(1)(H) of this Part, need not be satisfied unless a human is used to hold the animal.

e) Additional Requirements for Veterinary X-Ray Systems
   1) All individuals whose presence is required during an x-ray examination shall be protected from scatter radiation by protective aprons or gowns of not less than 0.25 millimeter lead equivalent or whole body protective barriers.
   2) All exams and retakes shall be ordered by the veterinarian.
   3) Unless required to restrain an animal, the operator shall stand at least 1.83 meters (6 feet) away from the useful beam and the animal during radiographic exposures.
   4) No individual, other than the operator, shall be in the x-ray room or area while exposures are being made unless such individual's assistance is required.
   5) When an animal must be held in position during radiography, mechanical supporting or restraining devices shall be used when technique permits.
   6) When a person is required to hold an animal during a radiographic procedure, the individual shall be protected with appropriate shielding devices, such as protective gloves and apron, and the person shall be so positioned that no part of his/her body except hands and arms will be struck by the useful beam.
      AGENCY NOTE: Veterinarians should review 32 Ill. Adm. Code 340.520 to determine if individuals who hold animals will need to use individual monitoring devices.

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 13 1998)

Section 360.110 Therapy Systems Operating Below 1 MeV

In addition to the provisions of Sections 360.10 through 360.30 of this Part, the requirements of this Section apply to x-ray therapy systems and associated facilities operating at energies less than 1 MeV.

a) Facility Design
   1) A therapeutic radiological physicist shall be consulted in the design of an x-ray therapy installation.
   2) Shielding requirements
      A) Each x-ray therapy installation shall be provided with such primary and secondary barriers as are necessary to assure compliance with 32 Ill. Adm. Code 340.
      B) For all x-ray therapy systems capable of operating above 150 kVp installed after October 15, 1993, facility design information shall be submitted to the Department for review prior to installation of the x-ray therapy system. Information submitted to the Department shall include, but need not be limited to, the following:
         i) Name and address of the planned installation.
         ii) Name, address and telephone number of the therapeutic radiological physicist who was consulted in the design of the installation.
         iii) A scale drawing that includes the location of the therapy system, control panel and doors to the room.
         iv) The structural composition and thickness of all walls, doors, partitions, floor and ceiling of the installation.
         v) The occupancy of areas adjacent to the installation.
         vi) Calculations that demonstrate the adequacy of the amount of shielding specified for each primary and secondary protective barrier.
         vii) Projected weekly dose rates in areas adjacent to the installation.
   3) Interlock. X-ray therapy systems operating at greater than 150 kVp shall have an interlock installed on each door of the therapy room. The interlock shall be wired into the electrical circuit in such a manner that when the door is opened, for any reason, the generation of x-rays will automatically be terminated and irradiation can be resumed only by manually resetting the controls on the control panel after the door is closed.
   4) Doors. The doors to the therapy room shall be designed and installed to allow opening from the inside at all times and shall be capable of being opened manually.
   5) Warning Lights. X-ray therapy systems operating above 150 kVp, and all therapy rooms to which access is possible through more

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than one entrance shall be provided with warning lights in a readily observable position near the outside of all access doors. The warning lights shall indicate when the useful beam is on.

6) Operator and control position
   A) X-ray Therapy Systems Operating at 150 kVp and Below. The control panel and operator shall be located either outside the therapy room or behind a protective barrier within the room.
   B) X-ray Therapy Systems Operating Above 150 kVp. The control panel and operator shall be located outside the therapy room.
7) Viewing System. Windows, mirrors, closed-circuit television or an equivalent system shall be provided to permit continuous visual observation of the patient during irradiation and shall be located so that the operator can observe the patient from the control panel.
   AGENCY NOTE: When the primary viewing system is electronic, a back-up system should be available for use in the event of failure of the primary system in order to ensure compliance with the requirements of subsection (e)(5) of this Section ~~below~~.
8) Communication. The facility design shall permit two-way aural communications between the patient and the operator at the control panel.
9) Signs required by 32 Ill. Adm. Code 340.920 shall be posted in the facility.

b) Equipment Requirements
   1) Leakage Radiation. When the tube is operated at its maximum rated continuous current for the maximum rated tube potential, the leakage radiation shall not exceed the value specified in the table below at the distance specified in the table for the classification of that x-ray system. Radiation measurements shall be averaged over an area up to, but not exceeding, 100 square centimeters.

X-Ray System	Leakage Limit	Measurement Location
Contact Therapy	25.8 microC/kg (0.1 R) per hour	5 centimeters from the tube housing
0 - 499 kVp	258 microC/kg (1 R) per hour)	1 meter from the source
500 kVp - 999 kVp	0.1 percent of useful beam or 258 microC/kg	1 meter from the source

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	(1 R) per hour, whichever is greater	

2) Beam-Limiting Devices
   A) Permanent fixed diaphragms or cones used for limiting the useful beam shall provide the same or a higher degree of protection as required for the tube housing assembly.
   B) Removable beam-limiting devices shall, for the portion of the useful beam to be blocked by these devices, transmit not more than one percent of the useful beam at the maximum kilovoltage and maximum treatment filter. This requirement does not apply to auxillary blocks or materials placed in the useful beam to shape the useful beam to the individual patient.
   C) Adjustable beam-limiting devices installed after October 15, 1993 shall meet the requirements of subsection (b)(2)(B) of this Section above.
   D) Adjustable beam-limiting devices installed on or before October 15, 1993 shall, for the portion of the x-ray beam to be blocked by these devices, transmit not more than five percent of the useful beam at the maximum kilovoltage and maximum treatment filter.
3) Filter System. The filter system shall be designed so that:
   A) The filters are securely positioned and will not become dislodged when the machine is positioned at any possible orientation;
   B) The radiation dose at one meter from the filter insertion slot opening does not exceed 258 mC/kg (1 R) per hour when the machine is operated at its maximum current and maximum tube potential;
   C) Each filter is labeled with its composition and thickness (for wedge filters, the wedge angle and maximum design field size shall appear on the wedge or wedge tray);
   D) If the x-ray therapy system uses changeable filters, there is a filter indication system which permits recognition of any added filter in place and indicates from the control panel the presence of a particular filter or absence of any filter; and
   E) For x-ray therapy systems installed after October15, 1993, an interlock prevents irradiation if the selected filter is not installed.
4) Tube/Aperture Alignment. The x-ray tube shall be mounted so that it cannot turn or slide with respect to the housing aperture.
5) Tube Housing Stability. The tube housing shall remain stable during treatment unless tube housing movement is a designed function of the system.
6) Source-Skin Distance (SSD) Indication
   A) Means shall be provided to indicate the SSD.

B) The SSD shall be indicated in centimeters and/or inches and the measured SSD shall correspond to the indicated value to within 0.5 percent.

7) Timer. A timer, which has a display at the control panel, shall be provided and shall meet the following requirements:
   A) The timer shall be activated with the production of radiation;
   B) For systems equipped with a shutter mechanism to control irradiation, the timer shall be activated when the shutter is opened;
   C) The timer shall terminate irradiation when a preselected time has elapsed;
   D) The timer shall permit presetting and determination of exposure times at least as short as 1 second; and
   E) The timer shall not permit an exposure if the operator has not selected a time for the exposure.
   AGENCY NOTE: The control panel should be equipped with a count-up timer to serve as a back-up to the control timer.

8) Control Panel Functions. The control panel, in addition to the displays required in other provisions of this Section, shall have:
   A) An indication of whether x-rays are being produced;
   B) A means for indicating x-ray tube potential and current; and
   C) A means for terminating an exposure at any time.

9) Shutters. Equipment that is provided with shutters shall meet the following requirements:
   A) The shutters shall have a lead equivalency not less than that of the tube housing assembly;
   B) The shutter shall be controlled electrically by the operator at the control panel; and
   C) An indication of shutter position shall appear at the control panel.

10) Multiple Tubes. Control panels capable of energizing more than one x-ray tube shall meet the following requirements:
   A) It shall be possible to energize only one x-ray tube at any time;
   B) There shall be an indication at the control panel identifying which x-ray tube is energized; and
   C) There shall be an indication at the tube housing assembly when that tube is energized.

11) Low-Filtration X-Ray Tubes. Each x-ray therapy system equipped with a beryllium window shall be clearly labeled as such upon the tube housing assembly and at the control panel.

c) Radiation Protection Survey. A radiation protection survey shall be performed by a therapeutic radiological physicist on each x-ray therapy system. The registrant shall maintain at the facility a copy of the most recent radiation protection survey report for review by the Department. Radiation protection surveys shall meet the following

additional requirements:

1) X-ray therapy systems installed after October 15, 1993 shall have a radiation protection survey performed by a physicist before the therapy system is first used for irradiation of a patient.

2) For all x-ray therapy systems, a radiation protection survey shall be performed by a physicist after any change in the x-ray therapy system or facility that might produce a radiation hazard. Such survey shall be performed before the therapy system is used to treat patients.

3) Survey reports shall include, but need not be limited to, the following:
   A) A diagram of the facility which details building structures and the position of the control panel, x-ray therapy system and associated equipment;
   B) A description of the x-ray therapy system including the manufacturer, model number and range of kilovolt potential;
   C) A description of the instrumentation used to determine radiation measurements, including the date and source of the most recent calibration for each instrument used;
   D) Conditions under which radiation measurements were taken; and
   E) Survey data including:
      i) Projected weekly dose equivalent in areas adjacent to the therapy room; and
      ii) A description of workload, use and occupancy factors employed in determining the projected weekly dose equivalent.

4) The registrant shall retain a copy of the radiation protection survey report and a copy of the report shall be provided to the Department within 30 days after completion of the survey.

5) Any deficiencies detected during the radiation protection survey that would constitute or result in a violation of 32 Ill. Adm. Code 340 shall be corrected prior to using the machine for treatment of patients.

6) The facility shall be operated in compliance with any limitations indicated by the therapeutic radiological physicist as a result of the radiation protection survey required by the Department.

d) Calibrations and Quality Assurance Checks.

1) Each x-ray therapy system installed after October 15, 1993 shall be calibrated by a therapeutic radiological physicist before the therapy system is first used for irradiation of a patient. The calibration of the x-ray therapy system shall include, but need not be limited to, determination of the following:
   A) The radiation output, expressed as exposure rate in air or dose rate in tissue, as a function of distance, field size, x-ray tube potential and current, filters and treatment applicators used;
   B) The half-value layer for each kilovoltage setting and filter

combination used;

C) The degree of congruence between the radiation field and the field indicated by each beam-limiting device; and

D) An evaluation of the uniformity of the radiation field.

2) Quality assurance checks shall be made by a therapeutic radiological physicist at intervals not to exceed 1 year. Quality assurance checks shall include, but need not be limited to, determination of the following:

A) The radiation output for a set of operating conditions specified by the therapeutic radiological physicist;

B) The coincidence of the radiation field and the field indicated by the beam-limiting device, except for systems equipped with fixed diaphragms or cones; and

C) The therapeutic radiological physicist shall establish criteria for quality assurance check measurements and shall determine corrective actions to be implemented if the criteria are exceeded.

AGENCY NOTE: Quality assurance checks should be performed at a frequency which is appropriate for the particular therapy system, as determined by the therapeutic radiological physicist and based on the history of stability of the radiation output of the machine. A suggested frequency is one that would result in a quality assurance check being performed at least once during a typical patient's course of treatment.

3) Whenever service or maintenance is performed on the therapy system, a therapeutic radiological physicist shall be notified and shall determine whether a calibration or quality assurance check is necessary to verify the characteristics of the beam.

4) Measurements of the radiation output of the x-ray therapy system shall be performed using a dosimetry system that has been calibrated by a calibration laboratory accredited by the American Association of Physicists in Medicine (AAPM). Calibration of the dosimetry system shall have been performed using a radiation beam of comparable half-value layer to the x-ray system to be calibrated. The dosimetry system shall meet one of the two conditions below:

A) The calibration of the dosimetry system shall have been performed within the previous 2 years and after any servicing that may have affected the calibration of the dosimetry system; or

B) The dosimetry system shall have been calibrated within the previous 4 years and shall have been subjected to a protocol which provides for checks of dosimetry constancy and provides for corrective action when results deviate by more than two percent from the expected values.

5) The registrant shall maintain at the facility records of machine calibrations, quality assurance checks and instrument

calibrations for inspection by the Department for a period of 5 years. Records to be maintained by the registrant shall include, but need not be limited to, the following:

A) Records of machine calibrations and quality assurance checks shall include identification of the x-ray therapy system, radiation measurements, the date the measurements were performed and the signature of the therapeutic radiological physicist who performed the measurements.

B) Instrument calibration records shall include the date of the last calibration and identity of the calibration laboratory. If a dosimetry system has been subjected to a protocol as described in subsection (d)(4)(B) of this Section ~~above~~, records shall be maintained that show the date and results of each constancy check performed on the system.

e) Operating Procedures

1) No x-ray therapy system shall be left unattended unless the system is secured against unauthorized use.

2) When a patient must be held in position for radiation therapy, mechanical supporting or restraining devices shall be used.

3) Other than the patient, no individual shall be in the therapy room unless such individual is protected by a barrier sufficient to meet the requirements of 32 Ill. Adm. Code 340.

4) Other than the patient, no individual shall be in the therapy room during exposures from x-ray therapy systems operating above 150 kVp.

5) The x-ray therapy system shall not be used for treatment of patients unless the operator can maintain visual observation of the patient and audible communication with the patient.

6) On contact therapy systems, a shield of at least 0.5 millimeter lead equivalency at 100 kVp shall be positioned over the entire useful beam exit port during periods when the tube is energized and the beam is not being used.

7) The tube housing assembly shall not be held by hand during operating unless the x-ray therapy system is designed to require such holding and the peak tube potential of the system does not exceed 50 kilovolts. In such cases, the person holding the tube shall wear protective gloves and apron of not less than 0.5 millimeter lead equivalency at 100 kVp.

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 18 1998)

Section 360.120 Therapy Systems Operating at 1 MeV or Greater

In addition to the provisions of Sections 360.10 through 360.30 of this Part, the requirements of this Section apply to particle accelerator systems operating at energies of 1 MeV or greater. Accelerator systems capable of producing radioactive materials in excess of the exempt quantities specified in

32 Ill. Adm. Code 330.Appendix B shall also be licensed pursuant to the provision of 32 Ill. Adm. Code 330.

a) Facility Design

1) The registrant shall consult a therapeutic radiological physicist in the design of a particle accelerator installation.

2) Shielding Requirements

A) Each accelerator installation shall be provided with such primary and secondary barriers as are necessary to assure compliance with 32 Ill. Adm. Code 340.

B) Facility design information for all accelerators installed after October 15, 1993 shall be submitted to the Department for review prior to installation. Information submitted to the Department shall include, but need not be limited to, the following:

i) Name and address of the planned installation;

ii) Name, address and telephone number of the therapeutic radiological physicist who was consulted in the design of the installation;

iii) A scale drawing that includes the location of the accelerator, control panel and doors to the room;

iv) The structural composition and thickness of all walls, doors, partitions, floor and ceiling of the installation;

v) The occupancy of areas adjacent to the installation;

vi) Calculations that demonstrate the adequacy of the amount of shielding specified for each primary and secondary protective barrier; and

vii) Projected weekly dose rates in areas adjacent to the installation.

3) Interlock. An interlock shall be installed on each door of the therapy room. The interlock shall be wired into the electrical circuit in such a manner that when the door is opened for any reason, the generation of radiation beams will automatically be terminated and irradiation can be resumed only by manually resetting the controls on the control panel after the door is closed.

4) Warning lights that indicate when the beam is on shall be provided in a readily observable position near the outside of all access doors to the therapy room.

5) Viewing System. Windows, mirrors, closed-circuit television or an equivalent system shall be provided to permit continuous visual observation of the patient during irradiation and shall be located so that the operator can observe the patient from the control panel.

AGENCY NOTE: When the primary viewing system is electronic, a back-up system should be available for use in the event of failure of the primary system in order to ensure compliance with the requirements of subsection (g)(1)(H) of this Section ~~below~~.

6) The facility design shall permit two-way aural communications between the patient and the operator at the control panel.

7) Signs required by 32 Ill. Adm. Code 340.920 shall be posted in the facility.

8) The control panel shall be outside the therapy room.

9) The facility design shall include emergency off buttons, at locations that allow shutting off the machine from inside the therapy room and at the control panel.

10) The doors to the therapy room shall be designed to allow opening from the inside at all times and shall be capable of being opened manually.

b) Equipment Requirements

1) Leakage radiation to the patient area shall be measured for each accelerator. Measurements shall be repeated following maintenance or service performed on the accelerator, as determined by a therapeutic radiological physicist.

A) For operating conditions producing maximum leakage radiation, the absorbed dose due to leakage radiation, excluding neutrons, at any point in a circular plane of 2 meters radius centered on and perpendicular to the central axis of the beam at the isocenter or normal treatment distance and outside the maximum useful beam size shall not exceed 0.1 percent of the maximum absorbed dose of the unattenuated useful beam measured at the point of intersection of the central axis of the beam and the plane surface. Radiation measurements shall be averaged over an area up to but not exceeding 100 square centimeters.

B) Records of the most recent radiation leakage measurements and the machine parameters used during the survey shall be maintained at the facility for inspection by the Department.

2) Beam-Limiting Devices. Adjustable or interchangeable beam-limiting devices shall transmit no more than two percent of the useful beam at the normal treatment distance for the portion of the useful beam that is to be attenuated by the beam-limiting device. The neutron component of the useful beam shall not be subject to this requirement. This requirement does not apply to auxiliary blocks or materials placed in the useful beam to shape the useful beam to the individual patient.

3) Source-Skin Distance (SSD) Indication

A) Means shall be provided to indicate the SSD.

B) The SSD shall be indicated in centimeters and/or inches and the measured SSD shall correspond to the indicated value to within 0.5 percent.

4) Filters

A) Each filter that is removable from the system shall be clearly marked with an identification number. Documentation available at the control panel shall contain a description of the filter. For wedge filters, the wedge angle and

maximum design field size shall appear on the wedge or wedge tray.

B) If the machine calibration measurements required by subsection (d) of this Section ~~below~~ relate exclusively to operation with an x-ray field flattening filter or electron beam scattering filter in place, such filters shall be removable from the machine only by the use of tools.

C) Equipment utilizing a system of wedge filters, interchangeable field flattening filters or interchangeable beam scattering filters shall meet the following requirements:

i) The equipment shall have an interlock that prevents irradiation if any filter selection operation carried out in the therapy room is not consistent with the selection of filter, beam type or beam energy at the control panel; and

ii) The equipment shall have an interlock system that prevents irradiation if any selected filter is not in the correct position.

5) Beam Monitoring System. All accelerator systems shall be provided with a beam monitoring system in the radiation head capable of monitoring and terminating irradiation.

A) Each beam monitoring system shall have a display at the treatment control panel which shall register accumulated monitor units.

B) The beam monitoring system shall terminate irradiation when the preselected number of monitor units has been detected by the system.

C) Accelerator systems manufactured after October 15, 1993 shall be equipped with a primary and a secondary beam monitoring system. Each beam monitoring system shall be independently capable of monitoring and terminating irradiation.

D) For units with a secondary beam monitoring system, the primary beam monitoring system shall terminate irradiation when the preselected number of monitor units has been detected. The secondary beam monitoring system shall terminate irradiation if the primary system fails.

E) An interlock device shall prevent irradiation if any beam monitoring system is inoperable.

F) In the event of power failure, the display information required in subsection (b)(5)(A) of this Section ~~above~~, shall be retrievable in at least one system for 20 minutes.

6) Beam Symmetry. For equipment equipped with beam bending magnets, the symmetry of the radiation beam in two orthogonal directions shall be monitored before the beam passes through the beam-limiting device. The equipment shall provide means of terminating irradiation automatically if the difference in dose

rate between one region and another region exceeds criteria specified by the manufacturer.

7) Control Panel

A) Selection and Display of Monitor Units

i) Irradiation shall not be possible until a selection of a number of monitor units has been made at the control panel.

ii) The selected number of monitor units shall be displayed at the control panel until reset.

iii) After completion of irradiation, it shall be necessary to reset the accumulated beam monitor units before treatment can be restarted.

B) Termination of Irradiation. It shall be possible to terminate irradiation and equipment movements at any time from the operator's position at the control panel.

C) Selection of Radiation Type. Equipment capable of both photon and electron therapy shall meet the following requirements:

i) Irradiation shall not be possible until the radiation type has been selected and displayed at the control panel.

ii) An interlock shall be provided to ensure that the machine will emit only the radiation type that has been selected.

iii) An interlock shall be provided to prevent irradiation with x-rays, except to obtain port films, when electron applicators are installed.

iv) An interlock shall be provided to prevent irradiation with electrons if accessories specific for x-ray therapy are installed.

D) Section of Radiation Energy. Equipment capable of producing radiation beams of different energies shall meet the following requirements:

i) Irradiation shall not be possible until a selection of energy has been made at the control panel.

ii) An interlock shall be provided to ensure that the machine will emit only the nominal energy of radiation that has been selected.

iii) The nominal value of the energy selected shall be displayed at the treatment control panel.

E) Selection of Stationary or Moving Beam Therapy. Equipment capable of both stationary and moving beam therapy shall meet the following requirements:

i) Irradiation shall not be possible unless either stationary therapy or moving beam therapy has been selected at the control panel. The selection of stationary therapy may be performed as a default selection if moving beam therapy is not selected.

ii) An interlock shall be provided to ensure that the machine will operate only in the mode that has been selected.

iii) An interlock shall be provided to terminate irradiation if the gantry fails to move properly during moving beam therapy.

iv) Means shall be provided to prevent movement of the gantry during stationary therapy.

v) The mode of operation shall be displayed at the control panel.

F) Timers. A timer shall be provided with a display at the treatment control panel, as a back-up device to the beam monitoring system.

i) The timer shall permit presetting and determination of exposure times.

ii) The timer shall be a cumulative timer which activates with the production of radiation and retains its reading after irradiation is interrupted or terminated.

iii) The timer shall terminate irradiation when a preselected time has elapsed if the beam monitoring system has not previously terminated irradiation. If set at zero, the timer shall not permit irradiation.

G) Security. The control panel shall be capable of being locked to prevent unauthorized use.

c) Radiation Protection Survey. A radiation protection survey shall be performed by a therapeutic radiological physicist on each accelerator. The registrant shall maintain at the facility a copy of the most recent radiation protection survey report for review by the Department. Radiation protection surveys shall meet the following additional requirements:

1) For each accelerator installed after October 15, 1993, a radiation protection survey shall be performed by a physicist before the system is first used for irradiation of a patient. The physicist who performs the radiation protection survey shall be a person who did not consult in the design of the accelerator installation (see subsection (a) of this Section ~~above~~) and is not employed by or within any corporation or partnership with the person who consulted in the design of the installation.

2) A radiation protection survey shall be performed by a physicist after any change in the accelerator or facility that might produce a radiation hazard. Such survey shall be performed before the system is used to treat patients.

3) The survey report shall include, but need not be limited to, the following:

A) A diagram of the facility which details building structures and the position of the control panel, accelerator and associated equipment;

B) A description of the accelerator system including the manufacturer, model number, beam type and beam energy range;

C) A description of the instrumentation used to determine radiation measurements, including the date and source of the most recent calibration for each instrument used;

D) Conditions under which radiation measurements were taken;

E) Survey data including:

i) Projected weekly dose equivalent in areas adjacent to the therapy room; and

ii) A description of workload, use and occupancy factors employed in determining the projected weekly dose equivalent.

4) The registrant shall retain a copy of the radiation protection survey report and a copy of the report shall be provided to the Department within 30 days after completion of the survey.

5) Any deficiencies detected during the radiation protection survey that would constitute or result in a violation of 32 Ill. Adm. Code 340 shall be corrected prior to using the machine for treatment of patients.

6) The facility shall be operated in compliance with any limitations indicated by the therapeutic radiological physicist as a result of the radiation protection survey.

d) Machine Calibration. Calibration measurements shall be performed on each accelerator system by a therapeutic radiological physicist before the therapy system is first used for irradiation of a patient. Subsequent calibrations shall be performed at intervals not exceeding 1 year.

1) Calibration measurements shall include, but need not be limited to, the following determinations:

A) Verification that the equipment is operating in compliance with the design specifications concerning the light localizer, variation in the axes of rotation for the table, gantry and jaw system and the beam flatness and symmetry at the specified depth;

B) The absorbed dose rate at various depths in water for the range of field sizes used, for each beam type and energy;

C) The uniformity of the radiation field and any dependency upon the direction of the beam;

D) Verification that existing depth-dose data and isodose charts applicable to the specific machine continue to be valid or are updated to existing machine conditions; and

E) Verification of transmission factors for all accessories such as wedges, shadow trays and compensators, as applicable.

2) Calibration radiation measurements shall be performed using a dosimetry system that has been calibrated by a calibration laboratory accredited by the American Association of Physicists in Medicine (AAPM), and meets the requirements of either

subsection (d)(2)(A) or (B) of this Section ~~below~~:

A) The calibration shall have been performed within the previous 2 years and after any servicing that may have affected calibration of the dosimetry system; or

B) The dosimetry system shall have been calibrated within the previous 4 years and shall have been:

i) Compared at annual intervals following the calibration to a dosimetry system with calibration obtained within the previous 2 years from a calibration laboratory accredited by the AAPM, and the results of the comparison indicate the calibration factor has not changed by more than two percent; or

ii) Subjected to a testing protocol that has been established by a therapeutic radiological physicist and that provides for checks of dosimetry constancy and provides for corrective action when results deviate more than two percent from the expected values.

AGENCY NOTE: Redundancy is a basic tenet of radiation dosimetry, therefore the therapeutic radiological physicist should establish a program of inter-comparison and constancy testing of calibrated dosimetry instruments to assure, as much as possible, the accuracy, reliability and reproducibility of the measurements performed with those instruments.

3) Calibration of the radiation output of the accelerator shall be performed in accordance with:

A) The protocol of Task Group 21, Radiation Therapy Committee, American Association of Physicists in Medicine (AAPM), entitled "A Protocol for the Determination of Absorbed Dose from High-Energy Photon and Electron Beams" published in Medical Physics, Volume 10, pages 741-771 (1983), exclusive of subsequent amendments or editions; or

B) The protocol of the Scientific Committee on Radiation Dosimetry of the AAPM, entitled "Protocol for the Dosimetry of X and Gamma Ray Beams with Maximum Energies Between 0.6 and 50 MeV", published in Physics, Medicine, and Biology, Volume 16, pages 379-396 (1971), exclusive of subsequent amendments or editions; or

C) Other machine calibration protocols provided that the registrant has submitted the protocols to the Department and the protocols cover the same topics as those contained in subsections (d)(3)(A) and (B)~~,~~ of this Section ~~above~~.

AGENCY NOTE: Copies of the two protocols referenced above are available for public inspection at the Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, Illinois. The protocols may also be obtained directly from the AAPM, One Physics Ellipse, College Park MD 20740-3846.

4) The radiation output of each therapy system shall be independently verified at intervals not to exceed 2 years. Independent verification shall consist of:

A) Verification of the machine output by a therapeutic radiological physicist who is not employed at the facility and does not perform the annual calibration; or

B) Alternate methods of verification of machine output, such as the use of mailed dosimetry devices, that use devices and procedures approved by the AAPM.

5) Machine calibration records shall include identification of the accelerator calibrated, the results of the tests specified in subsection (d)(1) of this Section ~~above~~ and shall be signed and dated by the therapeutic radiological physicist who performed the calibration.

6) The registrant shall maintain at the facility, for a period of 5 years, records of machine calibrations, instrument calibrations and independent verifications of machine output for inspection by the Department.

e) Quality Assurance Checks. A quality assurance (QA) check shall be performed by a therapeutic radiological physicist on each therapy system each calendar month. The interval between QA checks shall not exceed 45 days. QA checks shall also be performed after any change which could affect the radiation output, spatial distribution or other characteristics of the therapy beam, as determined by the physicist. Quality assurance checks shall also meet the following requirements:

1) Quality assurance checks shall include determination of:

A) The radiation output for a set of operating conditions specified by a therapeutic radiological physicist; and

B) The coincidence of the radiation field and the field indicated by the localizing device.

2) Radiation measurements shall be obtained using a dosimetry system that:

A) Meets the requirements of subsection (d)(2) of this Section ~~above~~; or

B) Has been directly compared by a therapeutic radiological physicist within the previous year with a dosimetry system which meets the requirements of subsection (d)(2) of this Section ~~above~~.

3) The therapeutic radiological physicist shall establish criteria for quality assurance check measurements and shall determine corrective actions to be implemented if the criteria are exceeded.

4) The registrant shall retain a record of quality assurance check measurements for inspection by the Department for a period of 5 years. The record shall include the date of the quality assurance check, identification of the accelerator, results of the quality assurance check measurements and the signature of the individual who performed the quality assurance check.

f) Quality Control. A comprehensive quality control program shall be implemented as specified by a therapeutic radiological physicist and shall meet the following requirements:
   1) The program shall be designed to test the operation and performance of the accelerator in order to maintain radiation safety and clinical reliability. The program shall include as a minimum the items listed in Section 360.Appendix E of this Part.
   2) The physicist shall specify the tolerance and frequency of performance for each item of the quality control program.
   3) The physicist shall specify what actions are to be taken for any item exceeding the specified tolerance.
   4) The physicist shall review, sign and date the results of the quality control program each calendar month.
   AGENCY NOTE: The elements of a comprehensive quality control program are described in Report No. 13 published by the AAPM, entitled "Physical Aspects of Quality Assurance in Radiation Therapy" (1984). A copy of this report is available for public inspection at the Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, Illinois. Report No. 13 may also be obtained directly from the AAPM, One Physics Ellipse, College Park MD 20740-3846.

g) Operating Procedures. The registrant shall have a therapeutic radiological physicist establish written operating and emergency procedures and shall ensure that the procedures are implemented before the accelerator is used for treatment of patients. Operators of accelerators shall receive training in the application of the procedures before using the accelerator to irradiate patients. A copy of the current operating and emergency procedures shall be maintained at the treatment control panel for use and review.
   1) Operating procedures to be implemented shall include instructions that:
      A) The accelerator is used in such a manner that patients, workers and the general public are protected from radiation hazards and the provisions of 32 Ill. Adm. Code 340 are met;
      B) No accelerator shall be left unattended unless it is secured against unauthorized use;
      C) The safety interlock system shall not be used to turn off the beam except in an emergency;
      D) The safety interlocks and warning systems required in subsections (a)(3), (a)(4) and (a)(9) of this Section ~~above~~ shall be tested for proper operation at monthly intervals;
      E) Mechanical supporting or restraining devices shall be used when a patient must be held in position for radiation therapy;
      F) No individual other than the patient shall be in the therapy room during irradiation;
      G) Start-up procedures for the accelerator, specified by the therapeutic radiological physicist, shall be performed daily prior to treatment of patients; and
      H) The accelerator shall not be used for treatment of patients unless the operator can maintain visual observation of the patient and audible communication with the patient.
   2) Emergency procedures shall include instructions for alternate methods for termination of irradiation and machine movements.
   AGENCY NOTE: The operating and emergency procedures should contain as a minimum the machine manufacturer's operations manual for the accelerator.
   3) Operating and emergency procedures shall include instructions for contacting the therapeutic radiological physicist when operational problems or emergencies occur and the actions that are to be taken until the physicist can be contacted.

h) Machine Maintenance. The therapeutic radiological physicist shall establish accelerator maintenance procedures that meet the following requirements:
   1) Whenever service or maintenance is performed on the accelerator, a therapeutic radiological physicist shall be notified of such service or maintenance.
   2) Following completion of service or maintenance involving radiation beam generation, beam steering or monitoring of the beam, but before the accelerator is again used for treatment of patients, the therapeutic radiological physicist shall review the service or maintenance report and shall determine whether a calibration or quality assurance check is necessary to verify the characteristics of the beam(s). If the therapeutic radiological physicist determines that a calibration or quality assurance check is necessary, the calibration or quality assurance check shall be performed before the accelerator is again used for treatment of patients.
   3) The therapeutic radiological physicist shall establish the frequency of routine maintenance and ensure that records of all service and maintenance performed on the machine are maintained at the facility.
   4) The therapeutic radiological physicist shall sign and date records of all service and maintenance performed on the machine.
   5) The therapeutic radiological physicist shall specify the qualifications of maintenance personnel and prohibit non-qualified personnel from repairing the machine or adjusting parameters on the machine.
   6) Circuit diagrams of the accelerator and interlock systems shall be maintained at the facility and kept current.

(Source: Amended at 22 Ill. Reg. 5963; effective MAR 13 1998)

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Section 360.APPENDIX A Medical Radiographic Entrance Exposure Measurement Protocol

The following protocol shall be used for measuring and calculating entrance skin exposures (ESE) for routine diagnostic examinations. Radiation measurements shall be performed with a calibrated radiation measuring device that is sufficiently sensitive to determine compliance with the criteria specified in Section 360.60(e) of this Part. The instrument shall have been calibrated within the previous 12 months with devices which have no more than a three-step (tertiary) calibration, traceable to the National Institute of Standards and Technology. Patients are not involved in the measurement protocol.

a) Position the x-ray tube at the source-image receptor distance (SID) routinely used and adjust the collimation to the active portion of a radiation measuring device ~~size routinely used for the examination~~.

b) Measure the distance from the x-ray source to the source against which the patient rests. Subtract the thickness of the patient to obtain the source-skin distance (SSD). The standard patient thickness for each projection to be measured shall be the following:

Projection	Thickness (cm)
Chest (PA), Grid	23
Chest (PA), Non-Grid	23
Abdomen (KUB)	23
Lumbo-Sacral Spine (AP)	23
Cervical Spine (AP)	13
Skull (lateral)	15
Foot (D/P)	8

c) Place a radiation measuring device in the center of the useful beam, measure and record the distance from the source to the device (SDD). Use of a test stand to position the device away from the table will reduce backscatter contribution. Placing the radiation measuring device at the actual source-skin distance (SSD) will accomplish this and allow direct reading of the ESE.

d) Set the exposure technique as follows:

1) For non-phototimed x-ray systems, set the controls to the exposure technique used by the x-ray operator for the standard patient thickness specified in subsection (b) of this Section ~~above~~.

2) For phototimed x-ray systems, set the controls to the exposure technique used by the x-ray operator for the standard patient thickness specified in subsection (b) of this Section ~~above~~, and use one of the two methods below:

A) Place an appropriate phantom (simulating body attenuation) in the useful beam between the radiation measuring device and the radiographic tabletop; or

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B) Set an appropriate exposure technique in the manual mode (without activation of the phototimer).
AGENCY NOTE: Specifications for appropriate phantoms are included in the American Association of Physicists in Medicine (AAPM) Report No. 31, entitled "Standardized Methods for Measuring Diagnostic X-Ray Exposures" (July 1990).
AGENCY NOTE: A copy of this report is available for public inspection at the Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, IL. Copies of this report may also be obtained from the AAPM, One Physics Ellipse, College Park MD 20740-3846.

e) Make a radiographic exposure (without patient) and record the reading obtained from the radiation measuring device

f) Calculate the entrance skin exposure for the specific examination, using the radiation exposure reading from subsection (e) of this Section ~~above~~ and the equation in this subsection (f) below (if a direct result was not obtained with the dosimeter at the SSD). ~~:~~ The entrance skin exposure equals the product of the radiation exposure reading from subsection (e) of this Section ~~above~~ multiplied by the square of the ratio of the SDD, to the SSD. This expression is mathematically represented by the equation below (if a direct result was not obtained with the dosimeter at the SSD):

$$ESE = (\text{Dosimeter Reading}) \times [SDD/SSD](2)$$

where: SDD = source-radiation measuring device distance
SSD = source to - skin distance

g) Compare the results of the calculation from subsection (f) of this Section ~~above~~ with the criteria specified in Section 360.60(e) of this Part to determine compliance.
AGENCY NOTE: There are many different techniques for measuring ESE which may result in significant differences in measured values. Factors that can cause variations include instrument calibration, backscatter, collimation, estimation of focal spot location, choice of phantom, location of dosimeter in the primary beam, etc. Because of these variations, the procedure for determining the ESE should be performed with strict attention to each detail noted above.

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 13 1998)

Section 360.APPENDIX B Mammography Dose Measurement Protocol

The technique factors used for performing a mammography examination shall not permit the mean glandular absorbed dose to exceed the limits specified in Section 360.71(h) of this Part. Radiation measurements shall be performed with an integrating radiation measuring device that is appropriate to the high beam intensity and mammographic kilovoltage peak (kVp) used, and sufficiently sensitive to determine compliance with the criteria specified in Section 360.71(h) of this Part. The instrument shall have been calibrated within the previous 12 months with devices which have no more than a three-step (tertiary) calibration, traceable to the National Institute of Standards and Technology.

The mammography exam dose limits are based on an average compressed breast value of 4.2 ~~4.5~~ centimeters having an average density (i.e., 50 percent adipose and 50 percent glandular).
Perform the following steps to determine the mean glandular dose to a nominal 4.2~~4.5~~- centimeter compressed breast:

a) Measure and record the x-ray system's useful beam half-value layer (HVL). (See Section 360.71(e) of this Part.) Any compression device normally in the useful beam during mammography procedures shall be required to be placed between the x-ray tube target and measuring device when determining the HVL. The useful beam shall be collimated to a size encompassing the detector.
AGENCY NOTE: Filters used for the HVL evaluation should be placed as close to the target as practical. The HVL forscreen-film mammography should not exceed the minimum acceptable HVL by more than 0.1 millimeter of aluminum equivalent (see Section 360.71(e) of this Part), and 1.6 millimeters of aluminum equivalent for xerography.

b) Determine the glandular dose to entrance exposure factor from the Mammography Dose Evaluation Table (see Section 360.Table A of this Part) using the appropriate HVL, kVp and x-ray tube target-filter material.
AGENCY NOTE: The kVp of screen-film mammography systems with molybdenum target-filter combinations should be accurately measured to determine the appropriate glandular dose to entrance exposure factor from Section 360.Table A of this Part.

c) If the equipment has the capability for variable source-image receptor distance, set the craniocaudal source-image receptor distance (SID) for the image receptor system used.

d) Position in the useful beam any compression apparatus normally used.
AGENCY NOTE: Some mammography systems have the capability of providing automatic adjustment of technique factors through feedback from the position of the compression device. On such systems, the compression device should be lowered to a position 4.2 ~~4.5~~ centimeters above the breast support assembly (BSA). The device should then be removed, inverted and replaced to allow placement of the phantom and measuring device on the BSA below the compression device. If the compression device cannot be replaced in an inverted position, the device should be placed in the beam using auxiliary support.

e) Placement of the Radiation Measuring Device
1) For systems equipped with automatic exposure control (AED):
A) Place a properly loaded film cassette in the cassette holder.
AGENCY NOTE: The loaded cassette is placed in the cassette holder to simulate, as much as is possible, the conditions under which actual patient exposures are made. Following radiation measurements, the film should be discarded and the cassette reloaded with unexposed film.
B) Place a mammography phantom (see the definition for "Mammography phantom" in Section 360.20 of this Part) on the breast support assembly (BSA). Align the phantom so that the edge of the phantom is aligned with the chest wall side of the BSA and the phantom is over the automatic exposure control device(s).
C) Place a radiation measuring device in the useful beam so the center axis of the device is parallel to the breast support assembly (BSA). The geometric center of the measuring device shall be positioned 4.2 ~~4.5~~ centimeters above the BSA, 2.5 centimeters from the chest wall edge of the BSA and immediately adjacent to either side of the mammography phantom.
2) For systems not equipped with AEC, place a radiation measuring device in the useful beam so that the center axis of the device is parallel to the breast support assembly (BSA). The geometric center of the measuring device shall be positioned so that it is centered 4.2 ~~4.5~~ centimeters above the BSA, 2.5 centimeters from the chest wall edge of the BSA and at the center line of the BSA~~.~~ (see Section 360.Illustration A of this Part). No part of the device's detector area shall be outside of the useful beam.

f) Collimate the x-ray field to the size normally used and assure that the area covered by the useful beam includes the detector area of the radiation measuring device and the mammography phantom if the equipment is equipped with automatic exposure controls.

g) Set the appropriate technique factors or automatic exposure controls normally used for a nominal 4.2 ~~4.5~~- centimeter compressed breast.

h) Measure and record the exposure in air with the radiation measuring device.

i) Measure and record the time of the exposure required in subsection (h) of this Section ~~above~~. The time for the exposure shall be equal to or less than 2.5 seconds (see Section 360.71(i) of this Part).

j) Calculate the mean glandular dose for a 4.2 ~~4.5~~- centimeter compressed breast by multiplying the measured exposure in millicoulombs per kilogram or in roentgens by the glandular dose to entrance exposure factor, which was determined using the procedure described in subsection (b) of this Section ~~above~~.
Example: A mammography system is provided with a molybdenum

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target-filter combination, and the HVL and kVp are determined to be 0.3 and 30, respectively. Therefore, for a 4.2~~4.5~~- centimeter compressed breast, the grandular dose to entrance exposure factor from the Mammography Dose Evaluation Table (Section 360.Table A of this Part) would be 159 ~~149~~ mrad. The measured roentgen output determined in subsection (h) of this Section is determined to be 1.8 R. Therefore, the mean glandular dose would be 1.8 R multiplied by 159 ~~149~~ mrad/R. This results in a mean glandular dose measurement of 286 ~~268~~ mrad. If the image receptor type used wasscreen-film with grid, the system would be in compliance with Section 360.71(h)(2) of this Part.

(Source: Amended at 22 Ill. Reg. 5901, effective MAR 13 1998)

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Section 360.APPENDIX C Mammography Phantom Image Evaluation

Mammography phantom image evaluation shall be performed using the procedure below. The evaluation shall be performed monthly as a part of the quality assurance program and as part of the routine inspection required by 32 Ill. Adm. Code 410. The evaluation shall be performed with the mammography phantom specified in Section 360.71(j)(2) of this Part.

a) Equipment necessary for mammography phantom image evaluation includes a densitometer, the mammograhpy phantom and mammographic cassette and film.

b) Load film in the mammographic cassette according to the manufacturer's instructions.

c) Place the properly loaded cassette in the cassette holder.

d) Place the mammography phantom on the breast support assembly (BSA) so that the edge of the phantom is aligned with the chest wall side of the BSA. Align the phantom so that the masses in the phantom are nearest the chest wall edge of the BSA and the fibers in the phantom are away from the chest wall edge of the BSA. If the mammography machine has the capability of automatic exposure control, place the phantom so that the phantom covers the phototimer sensor.

e) Position the compression device so that it is in contact with the phantom.

f) Select the technique factors used most frequently in the clinical setting for a 4.2~~4.5~~- centimeter compressed breast and make an exposure of the phantom.

g) Process the film in the processor used for clinical mammography films.

h) Examine the processed image for areas of non-uniformity of optical density and for the presence of artifacts due to dirt, dust, grid lines or processing.
AGENCY NOTE: If any of the problems noted above are evident on the processed image, the mammography machine film processor and film cassette(s) should be evaluated and the problem corrected. The phantom image evaluation should be repeated after the problem is corrected.

i) Measure and record the optical density of the film near the center of the phantom image.
AGENCY NOTE: The optical density of the film should be between 1.10 and 1.50. If the density of the phantom image is not in this range, the phantom image may not have enough contrast to visualize the objects necessary to determine compliance with the criteria of Section 360.71(j)(4) of this Part. Potential causes of film optical density problems include use of improper technique factors and either over-processing or under-processing the film.

j) Examine the phantom image and count and record the number of masses visualized. Repeat this procedure for the speck groups and the fibrils and record the number of objects visualized. There are a total of 16 imaging objects (5 masses, 5 speck groups and 6 fibrils) in the phantom. Evaluation criteria for objects visualized in the

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phantom image are in Section 360.71(j)(4) of this Part. As a minimum, the objects that must be visualized in the phantom image are:

1) the masses that are 0.75 millimeter or larger (a total of 3 masses);
2) the speck groups that are 0.32 millimeter or larger (a total of 3 speck groups);
3) the fibrils that are 0.75 millimeter or larger (a total of 4 fibrils).

AGENCY NOTE: The phantom image should be compared with previous films, including the original phantom image, to determine if subtle changes are occurring from month to month.

(Source: Amended at 22 Ill. Reg. 5901, effective MAR 13 1998)

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Section 360.APPENDIX D Computed Tomography Dose Measurement Protocol

Radiation measurements shall be performed by a diagnostic imaging specialist with a calibrated radiation measuring device that is designed for computed tomography (CT) dose measurements. The radiation measuring instrument shall have been calibrated within the previous 12 months with devices which have no more than a three-step (tertiary) calibration, traceable to the National Institute of Standards and Technology. Measurements shall be specified in terms of the multiple scan average dose (MSAD) and shall be performed with a head phantom specifically designed for making CT dose measurements.

AGENCY NOTE: There are two terms used to describe CT dosimetry measurements, the computed tomography dose index (CTDI) and the multiple scan average dose (MSAD). Manufacturers of CT systems measure and report CTDI pursuant to the requirements of the Code of Federal Regulations, 21 CFR 1020.33(b)(1). While the CTDI is carefully defined, it is difficult to measure accurately. The MSAD is easily measured and was the CT dose descriptor used by the Center for Devices and Radiological Health (FDA) in the Nationwide Evaluation of X-Ray Trends (NEXT). The CTDI is equivalent to the MSAD for a series of 14 contiguous scans spaced by the nominal tomographic thickness. The MSAD was chosen as the dose descriptor for this Part due to the ease of measurement and the applicability of the data generated for comparisons with the results of the NEXT study.

a) CT dose measurements shall be performed using a head phantom that meets the following requirements:
   1) The phantom shall be a right circular cylinder of polymethyl-methacrylate of density 1.19 plus or minus 0.01 grams per cubic centimeter.
   2) The phantom shall be at least 14 centimeters in length and shall have a diameter of 16 centimeters.
   3) The phantom shall provide means for the placement of a radiation measuring device in the center of the phantom along its axis of rotation.
b) Set up procedure
   1) Place the phantom on the patient support device and in the patient head rest, if available. Center the phantom in the CT gantry aperture and position the gantry so that it is perpendicular to the patient support device. Align the phantom so that the tomographic plane is centered along the axis of the phantom.
   2) Make a single scan of the phantom and determine if the center of the phantom is aligned with the axis of rotation of the scanner. If necessary, realign the phantom and repeat this procedure until the center of the phantom is aligned to within plus or minus 0.5 centimeters of the axis of rotation of the CT scanner.
   3) Place the radiation measuring device in the center of the phantom.
c) Exposure measurement
   1) Select and record the technique factors and the tomographic

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section thickness most frequently used for a CT examination of the head.

AGENCY NOTE: If routine CT examinations of the head are performed at the facility using a different tomographic section thickness for the top or bottom part of the head, the larger tomographic section thickness should be used for measurement of the MSAD.

2) Perform a single CT scan and record the exposure reading from the radiation measuring device. Repeat this procedure, without advancing the table or phantom, three times for a total of four scans and determine the average exposure reading for a single scan.

d) Calculation of MSAD

1) The MSAD shall be calculated using the mathematical expression below:

MSAD = (E x f x K x L) / T

where:

E = average exposure reading in coulombs per kilogram or in milliroentgens.
f = factor to convert exposure in air to absorbed dose in tissue or other attenuating matter, in grays per coulomb per kilogram or in rad per milliroentgen. For acrylic, at an effective energy of 70 KeV, f is equal to 30.2 Gy per C/kg (0.78 X 10(-3) rad/mR).
K = calibration factor to account for the radiation measuring device's response and volume.
L = effective length of the radiation measuring device in millimeters.
T = thickness in millimeters of the tomographic section selected.

AGENCY NOTE: This calculation assumes tomographic sections are contiguous, without overlap of sections or gaps between sections. EXAMPLE: The measurement is made with an ion chamber with an effective length of 100 millimeters and a calibration factor of 1.99. The thickness of the tomographic section from subsection (c)(1) of this Section ~~above~~ is 10 millimeters. The average exposure reading from subsection (c)(2) of this Section ~~above~~ is determined to be 306 mR. The MSAD is calculated as follows:

MSAD = (306 X 0.78 X 10(-3) X 1.99 X 100) / 10
MSAD = 4.7 rad

2) If the tomographic sections overlap, the MSAD must be multiplied by a fraction which is the thickness of the tomographic section

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divided by the scan increment.

EXAMPLE: Calculate the corrected MSAD for scan overlap technique, in a continuation of the above example, assume a scan increment of 5 millimeters.

Corrected MSAD = MSAD X (T / scan increment)
Corrected MSAD = 4.7 X (10 / 5)
Corrected MSAD = 9.4 rad

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 13 1998)

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Section 360.TABLE A Mammography Dose Evaluation Table

This table is used to determine the mean glandular dose in milligrays delivered by 25.8 mC/kg (or millirad) delivered by 1 R in air incident on a 4.2~~4~~5-centimeter thickness compressed breast of average density (50 percent adipose and 50 percent glandular tissue). Values listed are for the first half-value layer (HVL) in millimeters of aluminum (mm Al), for x-ray tube target-filter combinations of molybdenum/molybdenum (Mo/Mo) and tungsten/aluminum (W/Al). Linear extrapolation or interpolation shall be made for any HVL not listed.

Mean Glandular Dose in milligrays for 25.8 mC/kg (or millirad for 1 R, Entrance Exposure for a 4.2~~4~~5- Centimeter Compressed Breast of Average Density

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Section 360.TABLE A Mammography Dose Evaluation Table

This table is used to determine the mean glandular dose in milligrays delivered by 25.8 mC/kg (or millirad) delivered by 1 R in air incident on a 4.2~~4~~5-centimeter thickness compressed breast of average density (50 percent adipose and 50 percent glandular tissue). Values listed are for the first half-value layer (HVL) in millimeters of aluminum (mm Al), for x-ray tube target-filter combinations of molybdenum/molybdenum (Mo/Mo) and tungsten/aluminum (W/Al). Linear extrapolation or interpolation shall be made for any HVL not listed.

Mean Glandular Dose in milligrays for 25.8 mC/kg (or millirad for 1 R, Entrance Exposure for a 4.2~~4~~5- Centimeter Compressed Breast of Average Density

HVL	Mo/Mo Target-Filter X-Ray Tube Voltage (kVp)											W/Al Target-
(mm Al)	23	24	25	26	27	28	29	30	31	32	33	Filter Combination
0.23	116											
0.24	121	124										
0.25	126	129	131									
0.26	130	133	135	138								
0.27	135	138	140	142	143							
0.28	140	142	144	146	147	149						
0.29	144	146	148	150	151	153	154					
0.30	149	151	153	155	156	157	158	159				170
0.31	154	156	157	159	160	161	162	163	164			175
0.32	158	160	162	163	164	166	167	168	168	170	171	180
0.33	163	165	166	168	169	170	171	173	173	174	175	185
0.34	168	170	171	172	173	174	175	176	177	178	179	190
0.35		174	175	176	177	178	179	180	181	182	183	194
0.36			179	181	182	183	184	185	185	186	187	199
0.37				185	186	187	188	189	190	191	191	204
0.38					190	191	192	193	194	195	195	208
0.39						196	197	198	198	199	200	213
0.40							201	202	203	204	204	217
0.41								206	207	208	208	221
0.42									211	212	212	225
0.43										215	216	230
0.44												234
0.45												238

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~~HVL~~	~~Mo/Mo Target-Filter X-Ray Tube Voltage (kVp)~~											~~W/Al Target-~~
~~(mm Al)~~	~~23~~	~~24~~	~~25~~	~~26~~	~~27~~	~~28~~	~~29~~	~~30~~	~~31~~	~~32~~	~~33~~	~~Filter Combination~~
~~0.23~~	~~109~~											
~~0.24~~	~~113~~	~~116~~										
~~0.25~~	~~117~~	~~120~~	~~122~~									
~~0.26~~	~~121~~	~~124~~	~~126~~	~~128~~								
~~0.27~~	~~126~~	~~128~~	~~130~~	~~132~~	~~134~~							
~~0.28~~	~~130~~	~~132~~	~~134~~	~~136~~	~~138~~	~~139~~						
~~0.29~~	~~135~~	~~137~~	~~139~~	~~141~~	~~142~~	~~143~~	~~144~~					
~~0.30~~	~~139~~	~~141~~	~~143~~	~~145~~	~~146~~	~~147~~	~~148~~	~~149~~				~~170~~
~~0.31~~	~~144~~	~~146~~	~~147~~	~~149~~	~~150~~	~~151~~	~~152~~	~~153~~	~~154~~			~~175~~
~~0.32~~	~~148~~	~~150~~	~~151~~	~~153~~	~~154~~	~~155~~	~~156~~	~~158~~	~~159~~	~~160~~	~~160~~	~~180~~
~~0.33~~	~~153~~	~~154~~	~~155~~	~~157~~	~~158~~	~~159~~	~~160~~	~~162~~	~~163~~	~~164~~	~~164~~	~~185~~
~~0.34~~	~~157~~	~~159~~	~~160~~	~~161~~	~~162~~	~~163~~	~~164~~	~~166~~	~~167~~	~~168~~	~~168~~	~~190~~
~~0.35~~		~~163~~	~~164~~	~~166~~	~~167~~	~~168~~	~~169~~	~~170~~	~~171~~	~~172~~	~~172~~	~~194~~
~~0.36~~			~~168~~	~~170~~	~~171~~	~~172~~	~~173~~	~~174~~	~~175~~	~~176~~	~~176~~	~~199~~
~~0.37~~				~~174~~	~~175~~	~~176~~	~~177~~	~~178~~	~~178~~	~~179~~	~~180~~	~~204~~
~~0.38~~					~~179~~	~~180~~	~~181~~	~~182~~	~~182~~	~~183~~	~~184~~	~~208~~
~~0.39~~						~~184~~	~~185~~	~~186~~	~~186~~	~~187~~	~~188~~	~~213~~
~~0.40~~							~~189~~	~~190~~	~~191~~	~~192~~	~~192~~	~~217~~
~~0.41~~								~~194~~	~~195~~	~~196~~	~~196~~	~~221~~
~~0.42~~										~~200~~	~~200~~	~~225~~
~~0.43~~											~~204~~	~~230~~
~~0.44~~												~~234~~
~~0.45~~												~~238~~

AGENCY NOTE: Adapted from: Mammography Quality Control Manual ~~for Mammography:~~ Medical Physicist's Section, Revised Edition, 1994 ~~Manual, 1992, American College of Radiology/American Cancer Society.~~

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 13 1998)

DEPARTMENT OF NUCLEAR SAFETY

NOTICE OF ADOPTED AMENDMENTS

Section 360.TABLE B Half-Value Layer as a Function of Tube Potential

	X-ray Tube Voltage (kilovolt peak)	Minimum HVL (mm of Al)(1)	
Designed operating range	Measured Operating Potential	Specified Dental Systems (2)	Other X-Ray Systems (3)
Below 50	30	1.5	0.3
	40	1.5	0.4
	49	1.5	0.5
50 to 70	50	1.5	1.2
	60	1.5	1.3
	70	1.5	1.5
Above 71	71	2.1	2.1
	80	2.3	2.3
	90	2.5	2.5
	100	2.7	2.7
	110	3.0	3.0
	120	3.2	3.2
	130	3.5	3.5
	140	3.8	3.8
	150	4.1	4.1

(1) Linear extrapolation or interpolation may be made for an x-ray tube potential (kVp) not listed in the table ~~Table~~ B above (e.g., in the column entitled "Other X-ray Systems" operated at 20 kVp and 95 kVp, the minimum HVL required would be 0.2 and 2.6 millimeters of aluminum respectively).

(2) "Specified Dental Systems" means any dental x-ray system designed for use with intraoral image receptors and manufactured after December 1, 1980.

(3) "Other X-Ray Systems" means all x-ray systems required to meet the provisions of Sections 360.50, 360.60, 360.75, 360.90 (except "Specified Dental Systems") and 360.100 of this Part. Half-value layer requirements for mammography systems are specified in Section 360.71(e) of this Part.

(Source: Amended at 22 Ill. Reg. 5904, effective MAR 13 1998)

DEPARTMENT OF PUBLIC HEALTH

1998 REGULATORY AGENDA

a) Part(s) (Heading and Code Citation):
Skilled Nursing and Intermediate Care Facilities Code, 77 Ill. Adm. Code 300
Sheltered Care Facilities Code, 77 Ill. Adm. Code 330
Illinois Veterans' Homes Code, 77 Ill. Adm. Code 340
Intermediate Care for the Developmentally Disabled Facilities Code, 77 Ill. Adm. Code 350
Community Living Facilities Code, 77 Ill. Adm. Code 370
Long-Term Care for Under Age 22 Facilities Code, 77 Ill. Adm. Code 390

1) Rulemaking:

A) A Description of the Rule(s): The rules will be amended in response to P.A. 90-0366 (effective August 10, 1997), which amended the Nursing Home Care Act to state that before a prospective resident's admission to a facility, the facility shall advise the prospective resident to consult a physician to determine whether the prospective resident should obtain a vaccination against pneumococcal pneumonia.

B) Statutory Authority: Implementing and authorized by the Nursing Home Care Act [210 ILCS 45]

C) Schedule of dates for hearings, meetings, or other opportunities for public participation: These rules were considered at the Long-Term Care Facility Advisory Board, November 18, 1997.

D) Date agency anticipates submitting to the Administrative Code Division a Notice of Proposed Amendments for publication in the Illinois Register: April 1, 1998.

E) Will this amendment affect small businesses, small municipalities or not for profit corporations? This rulemaking will affect long-term care facilities.

F) Information concerning this regulatory agenda shall be directed to:

Gail DeVito
Administrative Rules Coordinator
Division of Legal Services
535 West Jefferson, 5th Floor
Springfield, IL 62761
217/782-2043

G) Other pertinent information concerning this amendment: None

DEPARTMENT OF PUBLIC HEALTH

1998 REGULATORY AGENDA

b) Part(s) (Heading and Code Citation):
Hospital Licensing Requirements, 77 Ill. Adm. Code 250
Home Health Agency Code, 77 Ill. Adm. Code 245
Skilled Nursing and Intermediate Care Facilities Code, 77 Ill. Adm. Code 300
Sheltered Care Facilities Code, 77 Ill. Adm. Code 330
Illinois Veterans' Homes Code, 77 Ill. Adm. Code 340
Intermediate Care for the Developmentally Disabled Facilities Code, 77 Ill. Adm. Code 350
Community Living Facilities Code, 77 Ill. Adm. Code 370
Long-Term Care for Under Age 22 Facilities Code, 77 Ill. Adm. Code 390

1) Rulemaking:

A) A Description of the Rule(s): The rules will be amended in response to P.A. 90-0441 (effective August 16, 1997), which amended the Health Care Worker Background Check Act to add "disqualifying crimes" to Section 25; to add a provision that an employer need not initiate an additional background check for an employee if the employer initiated a criminal background check for the employee after January 1, 1996, and prior to August 16, 1997; to provide that if a health care worker is suspended from employment based on the results of a criminal background check conducted under the Act and the results prompting the suspension are subsequently found to be inaccurate, the health care worker is entitled to recover back pay from his or her health care employer for the suspension period provided that the employer is the cause of the inaccuracy.

B) Statutory Authority: Implementing and authorized by the Health Care Worker Background Check Act [210 ILCS 46]

C) Schedule of dates for hearings, meetings, or other opportunities for public participation:

Part 245 was considered by the Home Health Advisory Council on January 7, 1998.
Part 250 was considered by the Hospital Licensing Board on November 12, 1997.
Parts 300, 330, 340, 350 and 390 were considered by the Long-Term Care Advisory Board on November 18, 1997.
Part 370 was considered by the State Board of Health on December 11, 1997.

D) Date agency anticipates submitting to the Administrative Code Division a Notice of Proposed Amendments for publication in the Illinois Register: April 1, 1998

DEPARTMENT OF PUBLIC HEALTH

1998 REGULATORY AGENDA

E) Will the rulemaking(s) affect small business, small municipalities or not for profit corporations? The rulemakings will affect long-term care facilities, hospitals, and home health agencies, respectively.

F) Information concerning this regulatory agenda shall be directed to:

Gail DeVito
Administrative Rules Coordinator
Division of Legal Services
535 West Jefferson, 5th Floor
Springfield, IL 62761
217/782-2043

G) Other pertinent information concerning this amendment: None

c) Part(s) (Heading and Code Citation):
Skilled Nursing and Intermediate Care Facilities Code, 77 Ill. Adm. Code 300
Sheltered Care Facilities Code, 77 Ill. Adm. Code 330
Illinois Veterans' Homes Code, 77 Ill. Adm. Code 340
Intermediate Care for the Developmentally Disabled Facilities Code, 77 Ill. Adm. Code 350
Community Living Facilities Code, 77 Ill. Adm. Code 370
Long-Term Care for Under Age 22 Facilities Code, 77 Ill. Adm. Code 390

1) Rulemaking:

A) A Description of the Rule(s): The rules will be amended in response to P.A. 90-0341, the Alzheimer's Special Care Disclosure Act. The Act requires a long-term care facility that offers to provide care for persons with Alzheimer's Disease through an Alzheimer's special care unit or center to disclose to the Department and to potential or actual clients certain information specified in the Act.

B) Statutory Authority: Implementing and authorized by the Alzheimer's Special Care Disclosure Act and the Nursing Home Care Act.

C) Schedule of dates for hearings, meetings, or other opportunities for public participation: These rules were considered at the Long-Term Care Facility Advisory Board, November 18, 1997.

D) Date agency anticipates submitting to the Administrative Code Division a Notice of Proposed Amendments for publication in the

DEPARTMENT OF PUBLIC HEALTH

1998 REGULATORY AGENDA

Illinois Register: April 1, 1998

E) Will this amendment affect small business, small municipalities or not for profit corporations? This rulemaking will affect long-term care facilities.

F) Information concerning this regulatory agenda shall be directed to:

Gail DeVito
Administrative Rules Coordinator
Division of Legal Services
535 West Jefferson, 5th Floor
Springfield, IL 62761
217/782-2043

G) Other pertinent information concerning this amendment: None

d) Part(s) (Heading and Code Citation):
Skilled Nursing and Intermediate Care Facilities Code, 77 Ill. Adm. Code 300
Sheltered Care Facilities Code, 77 Ill. Adm. Code 330
Illinois Veterans' Homes Code, 77 Ill. Adm. Code 340
Intermediate Care for the Developmentally Disabled Facilities Code, 77 Ill. Adm. Code 350
Community Living Facilities Code, 77 Ill. Adm. Code 370
Long-Term Care for Under Age 22 Facilities Code, 77 Ill. Adm. Code 390

1) Rulemaking:

A) A Description of the Rule(s): These amendments will update communicable disease policies, including tuberculin skin testing; update nursing and personal care requirements to parallel federal Medicare/Medicaid standards; clarify and update recreational and activity program requirements; prescribe requirements for electronic authentication of medical records. In addition, dietary rules will be amended by recognizing licensure of dieticians by the Department of Professional Regulation; clarifying and adding requirements for dietician consultation; clarifying requirements for diet orders and changing menu pattern requirements; recognizing the Recommended Dietary Allowances of the Food and Nutrition Board of the National Research Council, National Academy of Science. Appendices containing outdated material will be repealed.

B) Statutory Authority: Implementing and authorized by the Nursing Home Care Act [210 ILCS 45].

DEPARTMENT OF PUBLIC HEALTH

1998 REGULATORY AGENDA

C) Schedule of dates for hearings, meetings, or other opportunities for public participation: These rules were discussed at the Long-Term Care Facility Advisory Board meeting of February 4, 1998.

D) Date agency anticipates submitting to the Administrative Code Division a Notice of Proposed Amendments for publication in the Illinois Register: May 1, 1998

E) Will this amendment affect small business, small municipalities or not for profit corporations? This rulemakings will affect long-term care facilities.

F) Information concerning this regulatory agenda shall be directed to:

Gail DeVito
Administrative Rules Coordinator
Division of Legal Services
535 West Jefferson, 5th Floor
Springfield, IL 62761
217/782-2043

G) Other pertinent information concerning this amendment: None

e) Part(s) (Heading and Code Citation):
Skilled Nursing and Intermediate Care Facilities Code, 77 Ill. Adm. Code 300
Intermediate Care for the Developmentally Disabled Facilities Code, 77 Ill. Adm. Code 350
Long-Term Care for Under Age 22 Facilities Code, 77 Ill. Adm. Code 390

1) Rulemaking:

A) A Description of the Rule(s): Rule changes will clarify requirements for developmental disabilities aides, including time frames for complying with requirements for inclusion on the Nurse Aide Registry and enrollment in and completion of the developmental disability (DD) aide training course. Provisions for certification of foreign nurses as DD aides, including required documentation, will be added to the rules

B) Statutory Authority: Implementing and authorized by the Nursing Home Care Act [210 ILCS 45].

C) Schedule of dates for hearings, meetings, or other opportunities for public participation: These rules were discussed at the

DEPARTMENT OF PUBLIC HEALTH

1998 REGULATORY AGENDA

Long-Term Care Facility Advisory Board meeting of February 4, 1998.

D) Date agency anticipates submitting to the Administrative Code Division a Notice of Proposed Amendments for publication in the Illinois Register: May 1, 1998

E) Will this amendment affect small business, small municipalities or not for profit corporations? This rulemakings will affect long-term care facilities.

F) Information concerning this regulatory agenda shall be directed to:

Gail DeVito
Administrative Rules Coordinator
Division of Legal Services
535 West Jefferson, 5th Floor
Springfield, IL 62761
217/782-2043

G) Other pertinent information concerning this amendment: None

f) Part(s) (Heading and Code Citation):
Emergency Medical Services and Trauma Center Code

1) Rulemaking:

A) A Description of the Rule(s): Amendments will implement a provision in the EMS Act that requires the Department to approve development of a new EMS system or trauma center only when a local or regional need for establishing such EMS system or trauma center has been identified.

B) Statutory Authority: Implementing and authorized by the Emergency Medical Services (EMS) System Act [210 ILCS 50].

C) Schedule of dates for hearings, meetings, or other opportunities for public participation: State EMS Advisory Council, Spring meeting.

D) Date agency anticipates submitting to the Administrative Code Division a Notice of Proposed Amendments for publication in the Illinois Register: May 1, 1998

E) Will this amendment affect small business, small municipalities or not for profit corporations? This rulemaking will affect

DEPARTMENT OF PUBLIC HEALTH

1998 REGULATORY AGENDA

providers of emergency medical services.

F) Information concerning this regulatory agenda shall be directed to:

Gail DeVito
Administrative Rules Coordinator
Division of Legal Services
535 West Jefferson, 5th Floor
Springfield, IL 62761
217/782-2043

G) Other pertinent information concerning this amendment: None

JOINT COMMITTEE ON ADMINISTRATIVE RULES
ILLINOIS GENERAL ASSEMBLY

SECOND NOTICES RECEIVED

The following second notices were received by the Joint Committee on Administrative Rules during the period of March 10, 1998 through March 16, 1998 and have been scheduled for review by the Committee at its April 21, 1998 meeting in Springfield. Other items not contained in this published list may also be considered. Members of the public wishing to express their views with respect to a rule should submit written comments to the Committee at the following address: Joint Committee on Administrative Rules, 700 Stratton Bldg., Springfield IL 62706.

Second Notice Expires	Agency and Rule	Start of First Notice	JCAR Meeting
4/23/98	Department of Insurance, Portability of Cred- itable Service Time for Downstate and Sub- burban Police Pension Funds (50 Ill Adm Code 4404)	12/19/97 21 Ill Reg 16241	4/21/98
4/26/98	Illinois Commerce Commission, Telephone Assistance Programs (83 Ill Adm Code 757)	12/19/97 21 Ill Reg 16212	4/21/98
4/29/98	Department of Public Aid, Medical Assistance Programs (89 Ill Adm Code 120)	1/9/98 22 Ill Reg 1103	4/21/98

EXECUTIVE ORDER

98-1
BANGLADESH DAY (REVISED)

Whereas, Illinois is home to several thousand Bangladeshi emigrants; and

Whereas, the Bangladeshi community is part of the rich ethnic background of Illinois; and

Whereas, the Bangladesh Association of Greater Chicagoland was founded in 1981 to enhance Bangladeshi culture, to assist Bangladeshi emigrants, students, and visitors in becoming familiar with the American way of life, and to develop and promote friendship and relationships among its members, the community, and other organizations; and

Whereas, the 27th Independence Day of Bangladesh will be celebrated in Illinois on March 21, a day which marks the country's realization of freedom in 1971 and honors those who gave their lives for freedom's cause;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 21, 1998, as BANGLADESH DAY in Illinois.

Issued by the Governor January 5, 1998.

Filed by the Secretary of State March 6, 1998.

PROCLAMATIONS

98-45
NURSING HOME WEEK (REVISED)

Whereas, the long-term care facilities in Illinois are dedicated to providing the finest in health care and rehabilitation for ur convalescent, aged and chronically ill citizens; and

Whereas, this dedication has been forcefully demonstrated through continual striving to upgrade standards of care and improve service; and

Whereas, Illinois Health Care Association and its member facilities are sponsoring "The Quality of Caring" activities in observance of National Nursing Home Week beginning May 10, 1998;

Therefore, I, Jim Edgar, Governor of the State of Illinois proclaim May 10-16, 1998, as NURSING HOME WEEK in Illinois.

Filed by the Governor March 11, 1998.

Filed by the Secretary of State March 12, 1998.

98-91
GENE REINEKE DAY

Whereas, Gene Reineke has made significant contributions to the State of Illinois while he's been at the public trough for the last 18 years, serving as Governor Edgar's "staff director" since December 1994, taking on a "whole host" of new issues; and

Whereas, Gene's departure means the Governor is losing his chief Senate liaison because, as Pate believes, "Reineke is the only one down there who thinks like me;" and

Whereas, Gene will miss his close friends, the House Republicans, most notably the young press secretary whom Gene had the pleasure of banishing from a press conference in the Governor's Office; and

Whereas, the Governor truly appreciates Gene's willingness to volunteer. Two examples that quickly come to mind are Gene's volunteering to take jobs at the Illinois Republican Party and the 1992 Bush/Quayle campaign; and

Whereas, Gene's performance with the 1992 Bush campaign juggernaut meant he was truly destined to serve at the highest level of state government; and

Whereas, Gene attempted an amateur boxing career but has now retired undefeated having pummeled a lampshade and rabbit-punched his phones; and

Whereas, Gene will miss Mike McCormick's Southern Illinois stories, Elena Kezelis' hourly updates on lawyers and law enforcement, Eric Robinson's Friday afternoon crisis of the hour, Tom Livingston's musings over Meigs, Al Grosboll's discourse on deferred comp, and Deno's explanations of why the bill that was "dead" just passed the Senate; and

Whereas, Gene is leaving the public payroll to the lucrative field of public relations, it is important to note he's also leaving his state-owned Ford Taurus for a shiny green BMW (in case you haven't heard, Gene wants you to know it's the 500 series);

Therefore, I , Jim Edgar, Governor of the State of Illinois, hereby proclaim this date, February 28, 1998, as GENE REINEKE DAY in the State of Illinois and with all sincerity wish to thank him for countless hours of dedicated leadership for the citizens of Illinois, and wish him and his family good luck in the future.

Issued by the Governor February 26, 1998.
Filed by the Secretary of State March 6, 1998.

98-92
LEONARD D. "BARNEY" BARNARD DAY

Whereas, L.D. Barnard is one of the most caring and giving individuals in Canton and Fulton County; and

Whereas, whether it is his family, farming interests, his unending service to education or his endless concern for youth, Barney is always there with a helping hand; and

Whereas, Barney is the type of citizen that most communities would love to have as a member, and one that Canton and Fulton County should be honored to have as a member;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 4, 1998, as LEONARD D. "BARNEY" BARNARD DAY in Illinois.

Issued by the Governor February 26, 1998.
Filed by the Secretary of State March 6, 1998.

98-93
MARKETING INNOVATORS MONTH

Whereas, Marketing Innovators International, Inc. is an Illinois corporation which provides innovative incentive and performance solutions for numerous Illinois businesses; and

Whereas, Marketing Innovators" is one of the largest woman-owned businesses in the state and in the region; and

Whereas, Marketing Innovators inspires improved individual and corporate performance through a variety of awards and travel services; and

Whereas, February 15, 1998, marks the 20th anniversary of the incorporation of Marketing Innovators;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 1998 as MARKETING INNOVATORS MONTH in Illinois.

Issued by the Governor February 26, 1998.
Filed by the Secretary of State March 6, 1998.

98-94
OPERATION DESERT STORM REMEMBRANCE DAY

Whereas, many soldiers, sailors, airmen, and Marines from the State of Illinois participated in Operation Desert Storm; and

Whereas, many of the citizens of Illinois wholeheartedly supported the troops involved in this conflict; and

Whereas, we must remember the 14 Illinois citizens who made the ultimate sacrifice while serving their nation in the Persian Gulf; and

Whereas, February 28, 1998, marks the seventh anniversary of the cease fire announcement for Operation Desert Storm;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim February 28, 1998, as OPERATION DESERT STORM REMEMBRANCE DAY in Illinois.

Issued by the Governor February 26, 1998.
Filed by the Secretary of State March 6, 1998.

98-95
PROFESSIONAL SECRETARIES WEEK/PROFESSIONAL SECRETARIES DAY

Whereas, professional secretaries contribute to the strong economic climate throughout Illinois; and

Whereas, professional secretaries in business, education, and government ensure work-force productivity; and

Whereas, the professionalism and leadership of these secretaries enhance commerce in our state;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April 19-25, 1998, as PROFESSIONAL SECRETARIES WEEK and April 22, 1998, as PROFESSIONAL SECRETARIES DAY in Illinois in recognition of these hard-working individuals and the contributions they make to the business community.

Issued by the Governor February 26, 1998.
Filed by the Secretary of State March 6, 1998.

98-96
ARTS IN EDUCATION SPRING CELEBRATION MONTHS

Whereas, the Peoria County Regional Office of Education is committed to the establishment and continuation of school programs that provide students with the opportunity to achieve academic excellence; and

Whereas, the Peoria County Regional Office of Education is committed to support the development and promotion of fine arts and applied arts programs; and

Whereas, the Arts in Education Spring Celebration, held at the Peoria County Courthouse, provides a venue for students in grades Pre-K through 12 to showcase their works and talents; and

Whereas, the 1998 Arts in Education Spring Celebration will be held April 13 through May 29, 1998;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April and May 1998 as ARTS IN EDUCATION SPRING CELEBRATION MONTHS in Illinois.

Issued by the Governor March 2, 1998.
Filed by the Secretary of State March 6, 1998.

98-97
EMPLOY THE OLDER WORKER WEEK

Whereas, the United States President has traditionally honored older working Americans by proclaiming the second full week of March as National Employ the Older Worker Week; and

Whereas, the number of older adults in the workforce is steadily increasing as we approach the 21st century and their value to American business and industry has grown accordingly; and

Whereas, Illinois business, industry and government realize the importance of hiring, promoting and supporting mature workers and how future productivity depends on their participation in the workforce; and

Whereas, the State of Illinois annually acknowledges the contributions and achievements of older working Illinoisans by observing National Employ the Older Worker Week and sponsoring a statewide luncheon and awards ceremony hosted by the Illinois Department on Aging; and

Whereas, this annual celebration is distinguished by a special theme and

the 1998 theme, "Older Workers, 55 and Better...Shaping Up for the Future," signifies how active older workers support and contribute to a healthy economic future for Illinois and all of America; and

Whereas, more than 500 outstanding older workers, their employers and other distinguished guests will enjoy statewide recognition and a day of tribute and festivities in Springfield on March 19, 1998;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 8-14, 1998, as EMPLOY THE OLDER WORKER WEEK in Illinois.

Issued by the Governor March 2, 1998.

Filed by the Secretary of State March 6, 1998.

98-98

GOLDEN APPLE DAY

Whereas, March 20, 1998, has been set aside to recognize the 10th Anniversary of the Golden Apple Scholars of Illinois and will be marked with a celebration at the Grand Ballroom at Navy Pier in Chicago; and

Whereas, in 1988, the Golden Apple Scholars program was proposed and was designed to address the urgent need for resilient and creative teachers in Illinois schools of high need; and

Whereas, from the first group of 15 scholars from Chicago who were selected in 1989, the program now selects 60 scholars from across the state yearly; and

Whereas, the objectives for the Golden Apple Scholars of Illinois program include support for the recruitment and nomination of aspirants to the Scholars program, and support for those scholars in college through the beginning of their teaching career; and

Whereas, the Golden Apple Foundation is dedicated to the belief that excellent teaching is the single most critical component of the educational process;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 20, 1998, as GOLDEN APPLE DAY in Illinois.

Issued by the Governor March 2, 1998.

Filed by the Secretary of State March 6, 1998.

98-99

HOME EDUCATION WEEK

Whereas, the State of Illinois is committed to excellence in education; and

Whereas, the State of Illinois recognizes the importance of family support in educational programs; and

Whereas, home education was proven successful in the lives of George Washington, Thomas Edison, Helen Keller, Agatha Christie, Franklin Roosevelt, and others and may be administered in Illinois under statutory requirements of the school code;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim May 3-9, 1998, as HOME EDUCATION WEEK in Illinois.

Issued by the Governor March 2, 1998.

Filed by the Secretary of State March 6, 1998.

98-100

MIDWEST FERTILITY AWARENESS WEEK

Whereas, every individual has the right to the pursuit of health and happiness in his/her lifetime; and

Whereas, health is defined as a state of physical and mental well-being; and

Whereas, infertility is a disease which disrupts the normal function of the reproductive system and results in the inability to bear children, one of the most basic of human desires; and

Whereas, infertility affects about 10 percent of the reproductive age population - afflicting men and women in equal frequency - thereby impending upon the individual?s health and right to establish a family; and

Whereas, infertility is a disease with broad social and medical implications; and

Whereas, diagnosis and treatment for infertility should be considered part of health maintenance and disease prevention, and the early diagnosis of conditions which often lead to infertility should be encouraged and their potential harm factors shared with the public, in addition to medical community; and

Whereas, we must foster greater understanding of infertility and related reproductive health problems among Americans, and provide necessary support for individuals affected by this disease in their efforts to start and grow families; and

Whereas, Midwest Fertility Center together with the American Society for Reproductive Medicine (ASRM) are planning an infertility awareness and outreach program, Building Families Campaign; and

Whereas, Midwest Fertility Center, which opened in 1984, is having a party on June 13 from 11 a.m. - 1:30 p.m. at McCullom Park in Downers Grove;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim June 8-13, 1998, as MIDWEST FERTILITY AWARENESS WEEK in Illinois.

Issued by the Governor March 2, 1998.

Filed by the Secretary of State March 6, 1998.

98-101

ROBERT B. OXTOBY DAY

Whereas, Robert B. Oxtoby was the longest-serving member of the Capital Development Board, having first been appointed in 1977 and retaining his seat on the Board for more than 20 years; and

Whereas, Robert B. Oxtoby served as Chairman of the Capital Development Board between 1990 and 1995; and

Whereas, Robert B. Oxtoby passed away on July 4, 1997, leaving a legacy of the highest standards of public service; and

Whereas, the Capital Development Board is officially dedicating its Board Room at the William G. Stratton Building in Springfield in Robert B. Oxtoby's honor at its meeting March 10, 1998;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 10, 1998, as ROBERT B. OXTOBY DAY in memory of this loyal and dedicated public servant and in recognition of the inspiring example he set for all.

Issued by the Governor March 2, 1998.

Filed by the Secretary of State March 6, 1998.

98-102

WOMEN IN ILLINOIS SALUTED DURING WOMEN'S HISTORY MONTH

Whereas, 1998 marks the 78th anniversary of women's suffrage in the United States, the most important symbol of victory for the women's movement in this century; and

Whereas, the work and struggle of women throughout the last two centuries have resulted in a greater opportunity for the women of today than they have ever known in the history of our nation; and

Whereas, we recognize and applaud the efforts by women such as Elizabeth Cady Stanton, Mary A. Livermore, and Mary Eliza McDowell, who worked tirelessly to create a path for success upon which today's women travel; and

Whereas, women have made continual strides in the 20th century toward economic and societal equity despite the barriers that do exist, and on June 23, 1997, the Governor's Commission on the Status of Women in Illinois was created by Executive Order 1 and is serving to examine the economic, societal and legal barriers that continue to exist and investigate and recommend measures that remove barriers to equity for the women in Illinois; and

Whereas, women have learned from the knowledge and experience of the role models from the past and seek to provide opportunity and prosperity for the young women of Illinois' future;

Therefore, I, Jim Edgar, Governor of the State of Illinois, salute the women of Illinois during the month of March 1998 Women's History Month in Illinois.

Issued by the Governor March 2, 1998.

Filed by the Secretary of State March 6, 1998.

98-103
LIONESS CARAMEL DAY

Whereas, the Lioness Clubs of Illinois tirelessly donate their time to ongoing efforts to help the blind, visually impaired, deaf, and hearing impaired; and

Whereas, the Lioness Clubs of Illinois are sponsoring Lioness Caramel Day for Sight and Sound throughout our state on May 1, 1998; and

Whereas, Caramel Day is being held under the auspices of the Lions of Illinois Foundation, a nonprofit organization; and

Whereas, Illinois residents will benefit greatly from funds raised on Caramel Day;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim May 1, 1998, as LIONESS CARAMEL DAY in Illinois and urge citizens to support this worthwhile endeavor.

Issued by the Governor March 3, 1998.

Filed by the Secretary of State March 6, 1998.

98-104
BARBARA M. WHEELER DAY

Whereas, Barbara M. Wheeler has devoted untold hours and experience to improving education for the children of Illinois since her first election, in 1974, to the Board of Education of Community High School District 99 in Downers Grove; and

Whereas, she has served as president of her local board of education and has shared her expertise as an attorney by serving on numerous local committees; and

Whereas, in addition, she has devoted additional hours of service to the Downers Grove Chamber of Commerce, George Williams College, and the Downers Grove YMCA and other organizations; and

Whereas, she has served as a consultant to numerous Illinois school districts in searching for superintendents, as a consultant to the Chicago Board of Education and in numerous other advisory roles; and

Whereas, she has demonstrated her leadership ability by serving as President of the Illinois Association of School Boards; and

Whereas, she has been recognized for her leadership role with awards from the Illinois State Board of Education, the Illinois Association of School Administrators and the Illinois Association of School Boards; and

Whereas, she has taken on national-level responsibilities by serving as a member of the board of directors of the National School Boards Association; and

Whereas, her experience and ability have led to her election as Secretary-Treasurer, then President-elect of the National School Board Association; and

Whereas, she has been elected President of the National School Boards Association to serve as leader of the nation's 95,000 elected school board members;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April 6, 1998, as BARBARA M. WHEELER DAY in Illinois, honoring a life-long resident of this state, who has served her native state and her nation with great distinction.

Issued by the Governor March 4, 1998.

Filed by the Secretary of State March 12, 1998.

98-105
GIRL SCOUT WEEK

Whereas, Girl Scouts of the U.S.A. is the largest voluntary organization for girls in the world and recognizes that today's girls are tomorrow's leaders; and

Whereas, the Girl Scout Movement emphasizes building self-confidence, leadership skills, and decision-making ability; and

Whereas, Girl Scouts of the U.S.A. celebrates individuality in girls that they may develop their full potential; and

Whereas, Girl Scouts of the U.S.A. is open to all girls ages 5 to 17 and offers a program that is responsive to their needs and interests;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 7-14, 1998, as GIRL SCOUT WEEK and urge the citizens of Illinois to support the Girl Scouts in the Land of Lincoln Council in their endeavors.

Issued by the Governor March 4, 1998.

Filed by the Secretary of State March 12, 1998.

98-106
IRANIAN HERITAGE DAY

Whereas, there are several thousand Iranian-Americans who reside in the State of Illinois, with more than one million persons living throughout the United States; and

Whereas, the proud Iranian-American community of Illinois are applying their citizenry with their contributions in research, teaching, medicine, law,

business, arts and public service; and

Whereas, there are several community groups, media and cultural entities of Iranian-American organizations in Illinois striving to unite our communities, cities, states and the nation through cultural awareness and education for the preservation of our divers spectrum of cultures; and

Whereas, "Now Rouz" (the new day), the first day of Spring, is celebrated as New Year's Day among all Iranians regardless of their religious beliefs; and

Whereas, the traditional "Now Rouz" celebration begins with spring cleaning. This tradition of spring cleaning is to be extended to the cleansing of the body and soul from animosity and grievances. A fresh season is to follow through visiting and greeting one's neighbors, relatives and especially the elders in the family; and

Whereas, Iranians all over the world will be celebrating the arrival of Spring (the Iranian New Year 1377) on March 21, 1998;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 21, 1998, as IRANIAN HERITAGE DAY in Illinois.

Issued by the Governor March 4, 1998.

Filed by the Secretary of State March 12, 1998.

98-108
LA PETITE DELTA MONTH

Whereas, Delta Sigma Theta Sorority, Inc., a public service organization, was founded at Harvard University in 1913; and

Whereas, the sorority founders envisioned an organization of collegiate women pledged to philanthropic endeavors and community service, and their ideals of service and commitment to scholarship have withstood the test of time; and

Whereas, since its inception in January 1976, the Springfield-Decatur Area Alumnae Chapter of Delta Sigma Theta Sorority, Inc., has been committed to fostering high ideals in areas such as education, economic development, social action and mental health; and

Whereas, commencing in 1983, the 'La Petite Delta' program has provided educational and cultural enrichment activities for 8th grade young ladies in the Springfield and Decatur areas. The program offers a series of workshops, field trips and educational activities over a five-month period to help participants develop into positive role models for our communities; and

Whereas, the La Petite Delta galas will be April 4, 1998, and April 28, 1998, marking the program's 16th celebration;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April 1998 as LA PETITE DELTA MONTH in Illinois. I extend best wishes to the 10 program participants and the members of the Springfield-Decatur Area Alumnae Chapter of Delta Sigma Theta Sorority.

Issued by the Governor March 4, 1998.

Filed by the Secretary of State March 12, 1998.

98-108
MARCH OF DIMES MONTH

Whereas, the March of Dimes Birth Defects Foundation is celebrating its 60th Anniversary as a voluntary health organization working to ensure healthy lives for America's children; and

Whereas, the March of Dimes was founded in 1938 to raise funds through the efforts of thousands of volunteers to support the development of a vaccine that virtually eliminated the crippling human toll of polio; and

Whereas, for the past 40 years the March of Dimes has been a pioneer in saving babies from birth defects, low birth weight and infant death through research, education, community services and advocacy; and

Whereas, the nation's hope for assuring future generations of children a healthy start in life depends on the efforts and commitment of all Americans;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 1998 as MARCH OF DIMES MONTH in Illinois.

Issued by the Governor March 4, 1998.

Filed by the Secretary of State March 12, 1998.

98-109
ABSOLUTELY INCREDIBLE KID DAY

Whereas, Camp Fire Boys and Girls, the national organization, will sponsor Absolutely Incredible Kid Day on March 19, 1998; and

Whereas, Camp Fire Boys and Girls has issued a call to action, asking every adult in America to write a letter to a child or children on March 19, 1998; and

Whereas, Camp Fire Boys and Girls has established the goal that every child receive a letter on March 19, 1998; and

Whereas, the Metropolitan Chicago Council of Camp Fire, founded in 1912, serves more than 5,000 children annually in Cook, Lake, and McHenry County; and

Whereas, the Illinois Prairie Council of Camp Fire, founded in 1917, serves more than 3,000 children annually in DuPage, Will, Kane, and parts of Cook County; and

Whereas, through contemporary programs and by speaking out on issues affecting youth and their families, Camp Fire Boys and Girls helps youth cope with their changing world; and

Whereas, in Camp Fire, the choices and opportunities are inclusive to boys and girls; and

Whereas, Camp Fire Boys and Girls is commended for the valuable programs offered to young people in the State of Illinois and throughout the nation, and for the many services these young people perform for their communities through Camp Fire;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 19, 1998, as ABSOLUTELY INCREDIBLE KID DAY in Illinois.

Issued by the Governor March 5, 1998.

Filed by the Secretary of State March 12, 1998.

98-110
MOTHER OF THE YEAR DAY

Whereas, in order to provide an appropriate occasion for honoring the Illinois State Mother of the Year, as well as all the mothers in our state, we observe Mother of the Year Day; and

Whereas, it is not within our power to provide an honor commensurate with the love and devotion that is inherent in motherhood, but it is entirely appropriate that we demonstrate, as best we can, the sincere appreciation we feel for the unselfish guidance and unfailing loyalty that only a mother can

provide; and

Whereas, it is especially important at this time, when the sanctity of the home and stability of our society are so vital to the preservation of our free way of life, that we honor the Illinois Mother of the Year as the symbol of those women, who with great patience and understanding, shape our destiny; and

Whereas, the 1998 Illinois Mother of the Year is Loretta "Dolly" Albers of Henry;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 22, 1998, as MOTHER OF THE YEAR DAY in Illinois.

Issued by the Governor March 5, 1998.

Filed by the Secretary of State March 12, 1998.

98-111
POISON PREVENTION WEEK

Whereas, the Illinois Poison Center (IPC) has served the nine-county metropolitan Chicago area since 1953; and

Whereas, in 1997, the IPC was expanded to serve all residents of the State of Illinois following the closure of the Poison Information Center in Rockford; and

Whereas, the IPC has been designated by the Illinois Department of Public Health as a Regional Poison Control Center; and

Whereas, approximately 72 percent of all human exposures are handled by IPC staff without a referral to a hospital emergency room, saving more than $3.5 million annually in unnecessary hospital emergency room and office visits.

In sum, for every dollar spent on the IPC, more than $5 in unnecessary medical costs are saved;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 15-21, 1998, as POISON PREVENTION WEEK in Illinois.

Issued by the Governor March 5, 1998.

Filed by the Secretary of State March 12, 1998.

98-112
STOP THE VIOLENCE MONTH

Whereas, every year thousands of citizens are victims of violent crime; and

Whereas, citizens should continue to work together to halt the spread of violence across our country; and

Whereas, those who strive to make their neighborhoods safer should be commended for their efforts; and

Whereas, the mission of the National Stop the Violence Alliance, Inc. is organized to provide social, health, job training, educational and employment services and opportunity for our youth, elderly and the employable. To introduce ethnic diversity, the arts, law, crisis intervention counseling and spiritual growth. To enhance the lives of all people and promote peace, unity and harmony in our schools, churches, synagogues, neighborhoods and cities. To provide positive role models for our youth and end youth violence, drugs, dropouts, teen pregnancy, gang activities. To show alternative solutions to problems and produce programs. Last, to place a smile on all faces; and

Whereas, efforts to educate on the fundamental causes of violence and solutions to curb violence will be emphasized during the month of April;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April

1998 as STOP THE VIOLENCE MONTH in Illinois.

Issued by the Governor March 5, 1998.

Filed by the Secretary of State March 12, 1998.

98-113
MULTIPLE SCLEROSIS ASSOCIATION MONTH

Whereas, multiple sclerosis (MS), a neurological disease of the central nervous system, is the number one disabling disease of men and women between the ages of 20 and 40; and

Whereas, this disease can cause difficulties with vision, speech, balance and coordination; impaired mobility; bladder and bowel dysfunction; and a range of partial to complete paralysis; and

Whereas, MS is an unpredictable disease with no single infallible sign by which to diagnose the disease, and affects almost 500,000 of our fellow citizens and has no known cure; and

Whereas, the Multiple Sclerosis Association, founded in 1970 by John and Ruth Hodson, is a nonprofit organization dedicated to providing therapeutic equipment and comprehensive service to thousands of Multiple Sclerosis patients and their families;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim May 1998 as MULTIPLE SCLEROSIS ASSOCIATION MONTH in Illinois.

Issued by the Governor March 6, 1998.

Filed by the Secretary of State March 12, 1998.

98-114
AMERICAN RED CROSS MONTH

Whereas, founded by Clara Barton on May 21, 1881, the American Red Cross is a humanitarian organization led by volunteers and is the largest social service agency in the world; and

Whereas, Congress has designated the American Red Cross as the nation's main voluntary agency responsible for disaster relief and the primary emergency communications link between military personnel and their families; and

Whereas, the American Red Cross is the primary deliverer of health and safety services to the American people as approved by the American Academy of Sciences; and

Whereas, 55 American Red Cross Chapters and two blood regions in Illinois provide services for the more than 11.7 million residents of the state; and

Whereas, the American National Red Cross provides more than half of the nation's blood supply, serving hospitals throughout Illinois by collecting, processing and distributing more than 200,000 units of blood;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 1998 as AMERICAN RED CROSS MONTH in Illinois.

Issued by the Governor March 6, 1998.

Filed by the Secretary of State March 12, 1998.

98-115
AACRAO WEEK

Whereas, the American Association of Collegiate Registrars and Admissions Officers (AACRAO) is a member-driven association, shaped and directed by the

needs of professionals in higher education administration in the United States and more than 20 foreign countries; and

Whereas, over the past 85 years, AACRAO's membership has grown from 15 to nearly 9,000, particularly with the recent addition of high school and student members; and

Whereas, AACRAO members lead the association by nominating representatives to the Board of Directors and more than 30 committees and task forces. This includes three new task forces - Credentialing and Certification, Virtual Learning, and the Role and Mission of Enrollment Services - that promise to serve members with new direction and focus; and

Whereas, contact members have a special role in AACRAO and receive special benefits. They serve as the "point persons" between their institutions and the association and receive the many publications slated for one-per- institute distribution; and

Whereas, reflecting the multifaceted job requirements of today's higher education professionals, AACRAO addresses a wide variety of issues in its professional development workshops and seminars. The AACRAO annual meeting, held each year in mid-April, covers professional concerns ranging from enrollment management and information technology to cultural diversity and records management; and

Whereas, several free-standing conferences travel to different locations each year to address issues like strategic enrollment management, federal and state legislation, financial aid, working with volunteers, adapting to change, and many others; and

Whereas, technology has become increasingly important in the field of higher education, and AACRAO has taken on increasingly ambitious projects to keep the membership well informed; and

Whereas, AACRAO also plays a key role in the articulation between secondary and post-secondary institutions with its SPEEDE project;

Whereas, AACRAO will hold its annual meeting in Chicago, April 12-16;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April 12-16, 1998, as AACRAO WEEK in Illinois.

Issued by the Governor March 9, 1998.

Filed by the Secretary of State March 12, 1998.

98-116
ARTS EDUCATION WEEK (1)

Whereas, Arts Education and the Artsmart campaign advocate and celebrate the accessibility and viability of arts for children; and

Whereas, students' and children's lives are enriched by the art that surrounds them, the art that provokes thought, and the art that provides inspiration in their hearts and minds; and

Whereas, the awareness of the need for Arts Education and Artsmart in Illinois deserves recognition and support; and

Whereas, the arts may continue to flourish in abundant variety through innovative ideas such as Artsmart; and

Whereas, the Springfield Area Arts Council, the Illinois Alliance for Arts Education, the Target store of Springfield and the Illinois Arts Council have created a partnership that plays a vital role in bringing Arts Education and Artsmart to the citizens of Illinois;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March

16-21, 1998, as ARTS EDUCATION WEEK in Illinois, coinciding with Artsmart Day in Springfield.

Issued by the Governor March 9, 1998.

Filed by the Secretary of State March 12, 1998.

98-117
DOROTHY RICHARDSON DAY

Whereas, family members and friends of Mrs. Dorothy Richardson, a teacher for 35 years with the Chicago Board of Education, will celebrate her retirement with a dinner on Saturday, March 21, 1998, at 4:00 p.m. at the Condessa Del Mar Supper Club Dining Room; and

Whereas, Mrs. Richardson spent her career with the board as a classroom teacher, counselor, school librarian and an assistant administrator; and

Whereas, she began her career in 1962 at Cregier Vocational High School and ended her career at John Farren Fine Arts School on November 14, 1997; and

Whereas, during her tenure, Mrs. Richardson's courage, dedication and unselfish commitment to making sure that her students came first and doing everything in her power to provide a quality education has been a true testament of her many accomplishments; and

Whereas, in 1993, Mrs. Richardson was nominated by the Phi Delta Kappa, a sorority of the Board of Education, and won the honor of Librarian of the Year Award; and

Whereas, Mrs. Richardson has worked untiringly to making sure that her students are aware of her genuine concern for their future and has inspired many to strive for excellence in every endeavor;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 21, 1998, as DOROTHY RICHARDSON DAY in Illinois.

Issued by the Governor March 9, 1998.

Filed by the Secretary of State March 12, 1998.

98-118
MUSIC EDUCATION DAY

Whereas, music in the schools of Illinois is designed to bring about recognition of the vital place of music in the educational process; and

Whereas, music is a powerful and aesthetic force that gives our young people a sense of civilization because it dignifies the realm of feeling by merging intellect and emotion in the search for a humane way of life; and

Whereas, music is a basic influence in the lives of millions of people who participate in performing, listening and observing experiences developed through music in schools; and

Whereas, Music Education Day at our Capitol is a special opportunity for citizens to understand and support the ongoing process of music education; and

Whereas, it is fitting for the State of Illinois to recognize music in our schools as an essential part of the learning process and to encourage and support this basic art form in the curriculum of the schools of Illinois;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 19, 1998, as MUSIC EDUCATION DAY in Illinois.

Issued by the Governor March 9, 1998.

Filed by the Secretary of State March 12, 1998.

98-119
TREE CITY USA MONTH

Whereas, the forest resources in and around Illinois communities are important to the citizens of Illinois; and

Whereas, these forest resources can help to enhance the quality of life and provide economic well being by providing benefits of energy conservation, environmental quality, social well being, wood utilization, and job opportunities; and

Whereas, the management of our urban and community forest resources contribute to a health environment, cost savings in community maintenance programs and sustainable cities and communities; and

Whereas, a well managed urban and community forest is essential for enhanced public safety and well-being; and

Whereas, 20 units of government received Urban Forestry Assistance Grants for the establishment and enhancement of existing community forestry efforts; and

Whereas, more than 140 communities have qualified as Tree City USA communities and 35 of these communities have achieved the "GROWTH AWARD"; and

Whereas, Tree City USA communities have made significant contributions toward enhancing the quality of life by improving the forest resources of Illinois;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April 1998 as TREE CITY USA MONTH in Illinois, and ask all citizens to work together to preserve the natural beauty of our state this month and throughout the year.

Issued by the Governor March 9, 1998.

Filed by the Secretary of State March 12, 1998.

98-120
ARTS EDUCATION WEEK (2)

Whereas, the Illinois State Board of Education and Illinois Alliance for Arts Education, in cooperation with the Illinois Arts Council, are sponsoring the 16th annual Arts Education Week, March 15-21; and

Whereas, Arts Education Week is dedicated to the celebration and importance of music, theater, dance/movement, literary, media, and visual arts in the total education of all students; and

Whereas, the purpose of this celebration is to promote awareness of arts in education, encourage cooperative efforts among all arts organizations and schools, provide students with opportunities to highlight their accomplishments in a variety of arts experiences, and provide a forum to demonstrate support of arts education;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 15-21, 1998, as ARTS EDUCATION WEEK in Illinois and urge all citizens to join in this celebration and support the creative future of our youth.

Issued by the Governor March 10, 1998.

Filed by the Secretary of State March 12, 1998.

98-121
MANUFACTURERS WEEK

Whereas, more than 70 percent of the nation's research and development is performed by industry and these breakthroughs are directly responsible for the majority of technological advancements that improve our standard of living and increase workplace productivity; and

Whereas, overall productivity in manufacturing has increased 285 percent since 1960; and

Whereas, partly due to higher productivity, inflation rates in manufacturing have been far lower than the economy as a whole; and

Whereas, the Illinois Manufacturers' Association (IMA) is one of the oldest and largest manufacturing trade association in the United States, with a current membership of more than 8,000 executives representing 4,800 plants in Illinois; and

Whereas, IMA members employ 75 percent of the state's manufacturing work force or more than 800,000 Illinois citizens; and

Whereas, economists agree that for every 100 new manufacturing jobs, at least 205 additional jobs are created in other sectors of the economy;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 16-20, 1998, as MANUFACTURERS WEEK in Illinois.

Issued by the Governor March 10, 1998.

Filed by the Secretary of State March 12, 1998.

98-122
DAYS OF REMEMBERANCE OF THE VICTIMS OF THE HOLOCAUST

Whereas, the Holocaust was the state sponsored, systematic persecution and annihilation of European Jewry by Nazi Germany and its collaborators between 1933 and 1945; and

Whereas, Jews were the primary victims--six million were murdered--while many others were also targeted for destruction or decimation for racial, ethnic or national reasons; and

Whereas, 1998 marks the 52nd anniversary of the international Military Tribunal's trial at Nuremberg of 22 major Nazi leaders, and the continuation of subsequent military tribunals at Nuremberg as well as in other Allied-occupied sectors of Germany, to try additional Nazi criminals; and

Whereas, the charter for the Nuremberg Trials established, for the first time in international law, that crimes against humanity as well as crimes against peace and war crimes were punishable, thus making the individuals who were responsible for promulgating government policies that resulted in aggressive war and genocide accountable for their actions; and

Whereas, Americans recognize that, in addition to the need for international law to provide judicial accountability for crimes against humanity, each citizen is responsible for eternal vigilance against all tyranny; and

Whereas, April 19, 1998, has been designated, pursuant to an Act of Congress, as a Day of Remembrance of the Victims of the Holocaust, know internationally as Yom Hashoah;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April 19-25, 1998, as DAYS OF REMEMBRANCE OF THE VICTIMS OF THE HOLOCAUST and urge all citizens to collectively and individually strive to overcome bigotry, hatred and indifference through learning, tolerance and remembrance.

Issued by the Governor March 11, 1998.

Filed by the Secretary of State March 12, 1998.

98-123
IIA SPRINGFIELD CHAPTER DAY

Whereas, the Springfield Chapter of The Institute of Internal Auditors is a professional association affiliated with The Institute of Internal Auditors (IIA), an international organization devoted to the interests of the profession of internal auditing with 232 chapters worldwide and a total membership exceeding 60,000; and

Whereas, The Institute of Internal Auditors has set and issued the Standards for the Professional Practice of Internal Auditing; and

Whereas, internal auditors offer services invaluable to the executive operations of institutions and businesses in both the public and private sectors; and

Whereas, the Springfield Chapter chartered in 1978, serves more than 200 members representing 33 Illinois offices and agencies, four universities, 14 companies, one federal agency and one county office in the City of Springfield; and

Whereas, the Springfield Chapter of The Institute of Internal Auditors celebrates its 20th Anniversary this year, and its members reflect the high standards of the profession on internal auditing;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim March 19, 1998, as IIA SPRINGFIELD CHAPTER DAY in Illinois.

Issued by the Governor March 11, 1998.

Filed by the Secretary of State March 12, 1998.

98-124
NATIONAL 600 BOWLING CLUB WEEK

Whereas, the National 600 Bowling Club Inc. was formed in 1948; and

Whereas, in 1948 there were 66 charter members from 12 states, one of which was from the State of Illinois; and

Whereas, the National 600 Bowling Club has members in California, Illinois, Indiana, Missouri, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Texas, Washington and Wisconsin; and

Whereas, the National 600 Bowling Club Inc. will be celebrating its 50 years of pride and excellence this year;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim April 26-May 2, 1998, as NATIONAL 600 BOWLING CLUB WEEK in Illinois.

Issued by the Governor March 11, 1998.

Filed by the Secretary of Stat March 12, 1998.

98-125
NATIVE AMERICAN HISTORY MONTH

Whereas, 10,000 years ago, the first inhabitants of Illinois hunted, fished, and gathered food to support their families in areas such as Cahokia and Dickson Mounds; and

Whereas, these early residents considered Illinois' rich soils, abundant water, productive hardwoods, and tall prairie grasses a good place to call home; and

Whereas, at first, the early European settlers were not considerate of cultures other than their own, but through the kindness and hospitality of the

Native Americans, the settlers began to understand the value of cultural diversity; and

Whereas, through this sharing, the Europeans gained knowledge in crops, pottery, hunting, medicine and fishing; and

Whereas, Native Americans have an envious understanding of the environment and dedication to natural resources and have helped shape the rich culture of Illinois;

Therefore, I, Jim Edgar, Governor of the State of Illinois, proclaim October 1998 as NATIVE AMERICAN HISTORY MONTH and encourage all Illinoisans to recognize the contributions of Native Americans.

Issued by the Governor March 11, 1998.

Filed by the Secretary of State March 12, 1998.

Rules acted upon during the quarter of January 1 through March 31, 1998 (Issues 1-13) are listed in the Issues Index by Title number, Part number and Issue number. For example, 50 Ill. Adm. Code 4401 published in Issue 40 will be listed as 50-4401-40. The letter "R" designates a rule that is being repealed. Inquiries about the Issues Index may be directed to the Administrative Code Division at 217-782-4414 or jnatale@ccgate.sos.state.il.us (Internet address).

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